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ALLOCATING BUSINESS PROFITS FOR TAX PURPOSES: A PROPOSAL TO ADOPT A FORMULARY PROFIT SPLIT

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I. INTRODUCTION[1]

The current system of taxing the income of multinational firms in the United States is flawed across multiple dimensions. The system provides an artificial tax incentive to earn income in low-tax countries, rewards aggressive tax planning, and is not compatible with any common metrics of efficiency. The U.S. system is also notoriously complex; observers are nearly unanimous in lamenting the heavy compliance burdens and the impracticality of coherent enforcement. Further, despite a corporate tax rate one standard deviation above that of other OECD countries, the U.S. corporate tax system raises relatively little revenue, due in part to the shifting of income outside the U.S. tax base.

In this proposal, we advocate moving to a system of formulary apportionment for taxing the corporate income of multinational firms. Under our proposal, the U.S. tax base for multinational corporations would be calculated based on a fraction of their worldwide incomes. This fraction would be the sum of (1) a fixed return on their expenses in the United States and (2) the share of their worldwide sales that occur in the United States. This system is similar in significant respects to the current "residual profit split" method of the U.S. transfer pricing regulations and the OECD Guidelines, as well as to the current method that U.S. states use to allocate national income across states.[2] The state system arose due to the widespread belief that it was impractical to account separately for the economic activity supposedly earned in each state when states are highly integrated economically. Similarly, in an increasingly global world economy, it is difficult to assign profits to individual countries, and attempts to do so are fraught with opportunities for tax avoidance.

Under our proposed apportionment system, firms would have far fewer incentives to shift income to low-tax locations. This would help protect the U.S. tax base while reducing the distortionary features of the current tax system. In addition, the complexity and administrative burden of the system would be reduced. The proposed system would be both better

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1. Parts of this paper incorporate Reuven Avi-Yonah and Kimberly Clausing, Reforming Corporate Taxation in a Global Economy: A Proposal to Adopt Formulary Apportionment, in Path to Prosperity: Hamilton Project Ideas on Income Security, Education, and Taxes, Furman and Bordorff, eds. Brookings Institution (2008), pp319-44; also in 2007 TNT 114-38 (Jun. 13, 2007), and Michael Durst, A Statutory Proposal for U.S. Transfer Pricing Reform, Tax Notes Int'l 1041 (June 4, 2007). The authors acknowledge valuable feedback from Rosanne Altshuler, Mihir Desai, Jon Talisman, Michael Knoll, Reed Shuldiner, Chris Sanchirico, Joann Weiner, Diane Ring, Yariv Brauner, Joseph Guttentag, Philip West, and the Hamilton Project staff, especially Peter Orszag, Jason Bordoff, and Michael Deich.

2. We should note, however, that our proposal is significantly different from current state tax law, in ways discussed below.

suited to an integrated world economy and more compatible with the tax policy goals of efficiency, equity, and simplicity.

The following section will discuss the current U.S. system and describe its flaws. Section III will describe our proposed formulary apportionment system, discuss its advantages, and clarify how the proposal addresses the flaws of the current system. Section IV will address potential hurdles and problems associated with formulary apportionment, including implementation issues. Section V will conclude, briefly contrasting this proposal with other reform suggestions.

II. THE U.S. SYSTEM OF CORPORATE TAXATION

Under the current tax system, multinational firms (both resident and non-resident) pay tax to the U.S. government based on the income that they report earning in the United States. As is typical, the United States employs a separate accounting (SA) system, under which firms account for income and expenses in each country separately. The current U.S. tax rate is 35%. Figure 1A shows the evolution of corporate tax rates for OECD countries over the past quarter century. As is clear from this diagram, the U.S. statutory corporate tax rate has been increasing relative to other OECD countries over the previous 15 years, and it is now one standard deviation higher than the average OECD tax rate.[3]

The U.S. government taxes U.S. multinational firms on a residence basis, and thus U.S. resident firms incur taxation on income earned abroad as well as income earned in the United States. U.S. taxation is imposed only when income is repatriated by a foreign subsidiary to the U.S. parent via a dividend.[4] Thus, a subsidiary's income can grow free of U.S. tax prior to repatriation, a process known as deferral. Deferral provides strong incentives to earn income in low-tax countries.

As an example, consider a U.S. based multinational firm that operates a subsidiary in Ireland. Assume that the U.S. corporate income tax rate is 35% while the Irish corporate income tax rate is 12.5%. The Irish subsidiary earns €800 and decides to repatriate €70 of the profits to the United States. (Assume, for ease of computation only, a 1:1 exchange rate.) First, the Irish affiliate pays €100 to the Irish government on profits of €800.

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3. The trends for average effective tax rates are similar. See Figure 1, panel B.

4. The subpart F provisions of U.S. tax law prevent some firms from taking full advantage of deferral. Under subpart F, certain foreign income of controlled foreign corporations is subject to immediate taxation. This includes income from passive investments. The subpart F rules, however, do not seek even to approach the goal of eliminating the shifting of income overseas, and in fact they permit massive levels of such shifting.

It then repatriates $70 to the United States, using the remaining profit (€630) to reinvest in its Irish operations. The firm must pay U.S. tax on the repatriated income, but it is generally eligible for a tax credit of $100 (taxes paid) times 70/700 (the ratio of dividends to after-tax profits), or $10.[5] Owing to deferral, the remaining profits (€630) can grow abroad tax-free prior to repatriation.

This system creates a clear incentive to earn profits in low-tax countries. Firms may respond by locating real activities (jobs, assets, production) in low-tax countries. In addition, firms respond with various legal and accounting techniques to shift profits to low-tax locations, disproportionately to the scale of business activities in such locations. There are multiple such ways to shift income to subsidiaries in low-tax countries. For example, it may be advantageous for multinational firms to alter the debt/equity ratios of affiliated firms in high and low-tax countries in order to maximize interest deductions in high-tax countries and taxable profits in low-tax countries. Further, multinational firms have an incentive to distort the prices on intrafirm transactions in order to shift income to low-tax locations. For example, firms can follow a strategy of under- (over-) pricing intrafirm exports (imports) to (from) low-tax countries, following the opposite strategy with respect to high-tax countries. The most powerful of such techniques typically involve the transfer of interests in intangible property, such as patents, copyrights and trademarks as well as unpatented know-how, to subsidiaries in low-tax countries.

In theory, firms should be limited in their ability to engage in tax-motivated transfer pricing by government enforcement of existing transfer pricing laws. Governments generally employ an "arm's length" standard, requiring multinational firms to price intrafirm transactions as if they were occurring at arm's length. Nonetheless, there is universal agreement that this standard leaves substantial room for uncertainty as to the "correct" transfer pricing, as arm's length prices are often difficult to establish for many intermediate goods and services, and they are especially difficult, and probably impossible, to estimate in cases of licenses and other transfers of interests in unique intangible property such as a company's "crown jewel" patents and copyrights. Further, as argued below, the arm's length standard has become administratively unworkable in its complexity. As a result, the arm's length standard rarely provides useful guidance regarding economic value.

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5. In general, under the U.S. tax system, when a non-U.S. subsidiary distributes income to a U.S. parent through a dividend, the U.S. parent is entitled to a credit, against U.S. taxes for taxes paid out of the distributed income to a foreign government.

A. Why "Arm's Length" Prices Do Not Successfully Benchmark Transactions within Multinational Companies

At the heart of the SA system, with its reliance on estimated "arm's length" prices, is the assumption that each affiliated company within the group transacts with the other members of the group in the same way that it would transact if the members were unrelated. That central assumption defies reality, and it is not surprising that a system of "arm's length" pricing cannot yield sensible results.

Most fundamentally, the SA system ignores the fact that multinational groups of companies arise precisely in order to avoid the inefficiencies that arise when unrelated companies must transact with one another at arm's length. Multinational enterprises arise in large part due to organizational and internalization advantages relative to the efforts of unrelated, separate companies that seek to do business with one another. Such advantages mean that within multinational enterprises, profit is generated in part by internalizing transactions within the firm. Thus, for firms that are truly integrated across borders, holding related entities within the commonly controlled group to an "arms-length" standard for the pricing of intracompany transactions does not make sense, nor does allocating income and expenses on a country-by-country basis. In fact, a very similar logic was behind the use of formulary apportionment (FA) for U.S. state governments and among the Canadian provinces; in an integrated economy, it does not make sense to attribute profits and expenses to individual jurisdictions using separate-entity accounting.

Second, as explained above, the porosity of current transfer pricing rules creates an artificial tax incentive to locate profits in low-tax countries, both by locating real economic activities in such countries and by shifting profits toward more lightly taxed locations. It is apparent that U.S. multinational firms book disproportionate amounts of profit in low-tax locations. For example, Figure 2 shows the ten highest-profit locations for U.S. multinational firms in 2005, based on the share of worldwide (non-U.S.) profits earned in each location. While some of the countries are places with a large U.S. presence in terms of economic activity (the United Kingdom, Canada, Germany, Japan), seven of the top-ten profit countries are locations with very low effective tax rates.

The literature has consistently found that multinational firms are sensitive to corporate tax rate differences across countries in their financial decisions. Estimates from the literature suggest that the tax base responds to changes in the corporate tax rate with an average semi-elasticity of about -2; thus, countries with high corporate tax rates are likely to gain revenue by lowering their tax rate.[6] One recent study suggests that corporate income tax

6. See de Mooij (2005) for an overview of this literature.

revenues in the United States were approximately 35% lower due to income shifting in 2004.[7]

This problem has worsened as U.S. corporate rates have become increasingly out of line with those of other countries. In the past twenty years, most OECD countries have lowered their corporate income tax rates, whereas U.S. rates have been relatively constant. This increasing discrepancy between U.S. rates and foreign rates likely results in increasing amounts of lost revenue for the U.S. government due to strengthening income shifting incentives.

Also, the literature suggests a substantial responsiveness of real economic activities to tax rate differences among countries.[8] These findings imply both less activity in United States and less tax revenue for the U.S. government. However, the tax responsiveness of real activity is less immediately apparent in the data. For example, Figure 3 shows the top ten employment locations for U.S. multinational firms in 2005, based on the share of worldwide (non-U.S.) employment in each location. The high employment countries are the usual suspects – large economies with close economic ties to the United States. As the accompanying table indicates, tax rates are not particularly low for this set of countries.

Third, the current system is absurdly complex. As Taylor (2005) notes, observers have described the system as "a cumbersome creation of stupefying complexity" with "rules that lack coherence and often work at cross purposes." Altshuler and Ackerman (2005) note that observers testifying before the President's Advisory Panel on Federal Tax Reform found the system "deeply, deeply flawed," noting that "it is difficult to overstate the crisis in the administration of the international tax system of the United States." Current transfer pricing rules have spawned a huge industry of lawyers, accountants and economists whose professional role is to assist multinational companies in their transfer pricing planning and compliance.

Fourth, particularly given the high U.S. corporate statutory tax rates, the U.S. corporate tax system raises relatively little revenue. Figure 4 shows the evolution of government corporate tax revenues relative to GDP for OECD countries. For most OECD countries, revenues have increased as a share of GDP even as corporate tax rates have declined; the average OECD country receives about 3.25% of GDP from corporate tax revenue by the end of the sample. Most observers attribute this trend to a broadening of the tax base for many OECD countries during this time period. For the United States, revenues are lower; although they fluctuate with the cyclical position of the economy, they tend to be closer to 2.25% of GDP. There are several

7. This estimate is from Clausing (2008). The calculation is based on a regression of U.S. multinational firm affiliate profit rates on tax rate differences across countries. See Appendix A for more details.

8. See de Mooij (2005).

plausible reasons for the lower amount of U.S. revenue, including the increasingly aggressive use of corporate tax shelters, a narrower corporate tax base, and stronger incentives for tax avoidance, which tend to increase as the U.S. tax rate is high relative to other countries.[9]

Finally, it is important to note that the problems with the current system derive not from rules at its periphery, but instead from a fallacy that lies at the system's central core: namely, the belief that transactions among unrelated parties can be found that are sufficiently comparable to transactions among members of multinational groups that they can be used as meaningful benchmarks for tax compliance and enforcement.[10] For example, if one wants to determine the "arm's length" level of profitability of a U.S. distribution subsidiary of a foreign manufacturer of automobiles, one identifies one or more independent U.S. distributors of automobiles operating in economically, similar circumstances and uses the income of the independent distributor or distributors to benchmark the income of the U.S. subsidiary.

Such an approach might well have made sense eighty years ago, when the legislative language underlying today's arm's length standard for income tax purposes was first developed.[11] At that time, although multinational groups existed, available transportation and communications technology did not permit close centralized management of geographically dispersed groups. Therefore, members of multinational groups functioned largely as independent entities, and benchmarking their incomes or transactions based on uncontrolled comparables probably made good sense.

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9. Alan Auerbach "Why Have Corporate Tax Revenues Declined? Another Look." NBER Working Paper no. 12463. Cambridge, (Aug. 2006); also notes that there is a declining ratio of nonfinancial C corporation profits, although he notes that this is offset by an increasing average tax rate due to the increasing importance of tax losses.

10. Reuven Avi-Yonah "The Rise and Fall of Arm's Length: A Study in the Evolution of U.S. International Taxation." Finance and Tax Law Review 9:310 (updated version of article from 1995 Virginia Tax Rev. 15:80 (2006). This argument is presented in detail in e.g., Stanley I. Langbein "The Unitary Method and the Myth of Arm's Length." Tax Notes 30:625 (1986), and Michael C. Durst & Robert E. Culbertson Clearing Away the Sand: Retrospective Methods and Prospective Documentation in Transfer Pricing Today." Tax Law Rev. 57. 37-84 (2003).

11. For historical summaries see, e.g., Stanley I. Langbein "The Unitary Method and the Myth of Arm's Length." Tax Notes (1986), Rueven Avi-Yonah "The Rise and Fall of Arm's Length: A Study in the Evolution of U.S. International Taxation." (2006) and Michael C.Durst & Robert E. Culbertson "Clearing Away the Sand: Retrospective Methods and Prospoective Documentation in Transfer Pricing Today."(2003) at 42-64.

That situation changed, however, with the technological changes precipitated by the Second World War. Today, it is possible to exercise close managerial control over multinational groups, and these groups develop in all industries and geographic market segments in which the efficiencies of common control pose significant economic advantages. Moreover, in those industries and markets where common control poses advantages, it is typically economically infeasible to remain in the market using a non-commonly controlled structure (for example, by maintaining distributors that are economically independent of manufacturers). Therefore, in those markets in which multinational groups operate – that is, in those markets in which transfer pricing issues arise – it is unlikely that reasonably close "uncontrolled comparables" can be found. For example, to our knowledge, there are no independently owned distributors of mass-market automobiles in the United States; all of the distributors are owned by their manufacturers.[12]

The same is true of virtually every other industry that is conducted on a large global scale. In sum, no matter how assiduously one performs "functional analyses" designed to identify "uncontrolled comparables" that are reasonably similar to members of multinational groups, one is rarely going to find them. Certainly, such comparables will not be – and have not been – found with sufficient regularity to serve as the basis for a workable transfer pricing system. If the transfer pricing rules are going to be made tolerably administrable, Congress will need to restate them on a basis other than that of reliance on uncontrolled comparables.

The results of the current system, which assumes the availability of useful comparables in an economic environment where they are very unlikely to be found, are predictable:

(i) Companies and the government spend extraordinary sums each year on efforts at compliance and enforcement, largely through the preparation of "contemporaneous documentation"[13] by taxpayers and attempts at comprehensive examinations by the IRS involving some of the Service's most experienced and skilled personnel.

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12. Even some of the few apparent comparables that are found to exist often prove flawed. For example, often, such comparables arise in transitional situations in which, for example, an industry is entering a new market and operates temporarily through unrelated distributors, which after several years are acquired by the manufacturing company. Prices charged in such situations are unlikely to be representative of those that would be charged among members of commonly controlled groups. Similarly, one might find within a market independent distributors of small-volume "niche market" products within an industry, whereas the large-volume distributors will almost invariably be controlled by their manufacturers. See Michael C.Durst & Robert E. Culbertson "Clearing Away the Sand: Retrospective Methods and Prospoective Documentation in Transfer Pricing Today."(2003) at 47-48.

13. See Treas. Reg. § 1.6662-6.

(ii) Despite the expense of compliance and enforcement, companies and the IRS typically are dramatically far apart in their determinations of arm's length pricing. Controversies routinely involve hundreds of millions of dollars and are resolved at amounts that resemble neither the government's nor the taxpayer's positions, thereby casting grave doubt on the conceptual soundness of the underlying rules.[14]

(iii) The inability to predict whether their positions will be sustained leaves companies and their investors with large areas of uncertainty in their financial statements.

(iv) The absence of clear standards for compliance, coupled with the ability under the arm's length standard to apportion income to low-tax countries through legal arrangements governing the sitting of intangibles and (more recently) the bearing of risk, make it impossible for Congress to predict with reasonable accuracy the actual amount of federal revenue that will be raised as a result of any particular corporate tax rate that Congress believes it has enacted.[15]

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14. A 1992 study by the General Accounting Office concluded that less than 30% of transfer pricing adjustments proposed by IRS examiners ultimately were upheld in subsequent proceedings. GAO (1992). Similarly, in a recent multibillion dollar case settled out of court, the parties agreed on payment of 3.4 billion in settlement of pending transfer pricing claims; this represents concession of about 50% of the deficiency before the Tax Court, although since the settlement covered years in addition to those then pending before the court, the extent of IRS concession appears to have been larger. Overall, while results vary from case to case, the IRS typically recovers at trial only a small proportion of transfer pricing deficiencies that it has asserted. The lament by Judge Gerber in one case gives a good idea of the atmosphere to be found in this field of law, despite attempts to project an image of statistical science: "Once again, we are left stranded in a 'sea of expertise' and must navigate our own way through a complex record to decide what constitutes an appropriate arm's-length consideration." H Group Holding, Inc. v. Comm'r, T.C. Memo 1999-334. The supply of very large, disputed transfer pricing adjustments does not seem likely to be exhausted soon. See Nutt (2007).

15. Revenue implications of a move from the current transfer pricing system are explored below. In connection with the potential revenue implications of the proposed transfer pricing reform, it is useful to consider the implications for transfer pricing reform proposals of the recently increased accounting scrutiny of companies' uncertain tax positions following the reforms of the Sarbanes-Oxley Act and, especially, the Financial Accounting Standards Board's Interpretation 48 (FIN 48). The new accounting rules probably reduce companies' expectations of financial statement benefit from taking what might be perceived as "aggressive" tax positions. Therefore, some of the revenue gains that might otherwise be expected from the reform of transfer pricing rules (and from some other possible tax reforms) might occur even in the absence of the reform. The recent accounting changes therefore complicate the task of estimate revenue effects from reforms such as that proposed in this article.

(v) The fact that neither taxpayers nor enforcement authorities typically have clear standards for judging compliance means that issues involving very large amounts – billions of dollars – of federal revenue are resolved in examination, settled in Appeals, resolved in negotiations under tax treaties with foreign governments, negotiated through advance pricing agreements, or settled by attorneys out-of-court after examination. In most cases, federal privacy laws require that this decision-making occur outside the public eye. In the authors' experience, those involved in this process have served their roles with both integrity and skill. Nevertheless, the resolution of issues involving such large amounts of money, without the benefit of clearly discernable decision-making standards and public scrutiny, is not healthy for the tax system.

(vi) A related problem is that the uncertain results under current transfer pricing law degrade the quality of tax practice on the parts of both taxpayer and government representatives, regardless of the high standards of practice that both sides seek to maintain. Both sides are tempted to state, as "starting points" for what is expected to be extended negotiation, positions that strain the edges of what most would consider reasonable. The resulting atmosphere contributes to a lessening of the publicly perceived credibility of both corporations and the government – a development that is seriously damaging to what will always remain a largely mixed economic system.

(vii) The vulnerability of the current transfer pricing system to the shifting of income based on intangibles ownership and risk-bearing makes necessary numerous additional complexities in the international tax system. If the current transfer pricing regime were replaced by a more formulary approach such as that suggested below, Congress could eliminate from the Code many or all of the "base company" provisions of subpart F, retaining only those portions of subpart F dealing with passive investment income.

The recent financial accounting changes, however, mitigate the problems of current transfer pricing rules only to a limited extent. Although the accounting reforms might prevent some transactions in which difficult issues may have arisen, or have altered the pricing that companies have chosen to adopt in some circumstances, the reforms generally do not eliminate the uncertainty of current transfer pricing rules but shift some of the burden of dealing with it to financial auditors. Moreover, much of the portability of income to low- or zero-tax jurisdictions under the current rules does not depend on positions that most would view as "aggressive," but instead involve straightforward application of today's transfer pricing principles. Further, even if some arguably aggressive transactions or reporting positions are eliminated, current transfer pricing rules will continue to impose administrative burdens and uncertainties even with respect to entirely routine transactions with no hint of tax avoidance intent. Thus, while the new accounting rules pose many benefits, including imposing some restraints on transactions arguably involving "aggressive" transfer pricing planning, they leave substantial need for reform of the transfer pricing tax rules themselves.

Considerable complexity would, of course, be retained, but much would be eliminated. Similarly, transfer pricing vulnerabilities probably constitute the most pressing argument against adoption of a territorial tax system.[16] Reforming transfer pricing rules could tip the policy-making balance in favor of adopting a territorial system, thereby permitting elimination of the grossly complex foreign tax credit system except as it relates to U.S. taxpayers' passive investment income (which would remain subject to the U.S. tax jurisdiction and for which credit rules would need to be retained).[17] The current transfer pricing system therefore can be seen as the tail that wags the dog of much unnecessary tax complexity.

III. A PROPOSAL TO ADOPT A FORMULA-BASED PROFIT SPLIT SYSTEM OF APPORTIONMENT

Our proposal would address most of the aforementioned flaws in the current system of international corporate taxation. Under a formulary profit split, tax liabilities would reflect the economic reality of globally integrated businesses, and they would not vary among businesses based on their relative abilities to shift the ownership of intangible property. Firms would have no incentive to shift income across countries through legal and accounting techniques, as tax liabilities would be based on total world income as well as the share of a firm's sales that occur in each destination. Moreover, since even the shifting of income involving legal and accounting techniques typically involves moving real activities to low-tax countries, the tax incentive to locate plant and equipment, as well as employment, in low-tax countries would also be reduced.[18]

Eliminating companies' ability to shift income would raise large amounts of federal revenue. In particular, if the proposal offered here were implemented in a revenue neutral fashion, it would enable a substantial cut in the corporate income tax rate. Such a reduction would mean that many corporate actors benefit directly by a move to a formula-based system,

16. Edward D. Kleinbard "Throw Teritorial Taxation From the Train." Tax Notes Today, Feb. 6, 2007..

17. Id.

18. Under typical principles of tax law a multinational must be able to show tax examiners some "substance" in those countries in which they claim income.

thereby suggesting that the proposal might have a realistic chance of widespread political support.[19]

A. How Would a Formulary Profit Split Work?

The proposed approach will divide income from each business "activity" of a multinational group among the countries in which that activity is conducted. An "activity" will be defined as a group of functions related to the conduct of a particular trade or business to which two or more related parties contribute, determined at the largest level of aggregation of functions performed that will permit reliable identification of such related parties' respective contributions to the functions comprising an activity. That activity is treated as a single taxpayer and its income is calculated by subtracting worldwide expenses from worldwide income, based on a global accounting system, without regard to legal distinctions among units. The resulting net income is apportioned among taxing jurisdictions based on a formula that takes into account various factors. Each jurisdiction then applies its tax rate to the income apportioned to it by the formula and collects the amount of tax resulting from this calculation.

Following the pattern of one of the transfer pricing methods currently used by the United States and many other countries, the "residual profit split" method,[20] the proposed system would (1) first assign to each country an estimated market return on the tax-deductible expenses incurred by the multinational group in that country (this element of income is typically called the "routine" income in current tax practice under the residual profit split method), and (2) would then divide any additional income (which, in current transfer pricing practice, typically is called the "residual" income and is seen as deriving from a multinational group's

19. As both a political and economic matter, though, it should be recognized that a movement to a more formulary system, while permitting a lowering of corporate tax rates across-the-board, is unlikely to permit the lowering of rates to such an extent as compensate those companies that today make heavy use of deferral opportunities for the loss of those opportunities. Therefore, for those companies, typically in "brick and mortar" industries, that have been unable to use current opportunities to shift income, a revenue-neutral implementation of a formulary approach would represent a significant tax cut, whereas those that have been able to shirt substantial income under the "arm's length" system would experience an effective increase in tax. To mitigate this effect, it might be feasible to phase in the new system gradually, as described below; alternatively, it is sometimes suggested that measures to eliminate the tax advantages of deferral might be accompanied by a "one time" opportunity to repatriate deferred income on favorable terms, as has been offered in the past under the American Jobs Creation Act of 2004.

20. See Treas. Reg. § 1.482-6; OECD Guidelines, chapter 6.

intangible property) among the countries based on the group's relative sales in each country.

The particular formula used, with the "residual" apportioned according to sales, would provide a substantial improvement of the formulas typically used among the U.S. states. In the experience of the U.S. states, income has been allocated to state jurisdictions using a variety of formulas. Historically, many U.S. states have used the so-called "Massachusetts formula" which employs equal weights on property, payroll and sales. For example, under an equally-weighted formula apportionment system, tax liability to the U.S. government would be based on the U.S. tax rate times the fraction of worldwide profits that are attributed to the United States. This fraction would be based on how much of worldwide economic activity (an average of sales, assets, and payroll shares) occurs in the United States.

Observers have noted, however, that an FA system such as that used by the states creates an implicit tax on the factors used in the formula, thus discouraging assets and employment in high-tax locations. Some of these concerns are also present here due to the reliance on expenses in calculating the normal return. Still, we propose a simpler formula for assigning residual profit, which would only consider the fraction of sales in each location. Sales would be determined on a destination-basis, based on the location of the customer rather than the location of production. We propose this destination-basis sales formula for several reasons; alternative formulas are also discussed in Appendix B.

The key advantage of a sales-based formula is that sales are far less responsive to tax differences across markets than investment in plant, and employment, as the customers themselves are far less mobile than firm assets or employment. Even in a high-tax country, firms have an incentive to sell as much as possible. In addition, if some countries adopt sales-based formulas for allocating residual profits, other countries will have an incentive to adopt sales based formulas as well in order to avoid losing payroll or assets to countries in which these factors are not part of the formula.

The U.S. state experience reinforces the merits of this proposal. In recent years, many U.S. states have shifted to a formula that double-weights the sales factor. State incentives to move toward a sales-based formula are well documented. For example, Edminston (2002) generates a model with this prediction, and Omer and Shelley (2004) document this trend empirically. Goolsbee and Maydew (2000) demonstrate that U.S. states that lower the weight on the payroll factor experience increases in manufacturing employment. According to Weiner (2005), 23 states double-weight sales as of 2004, and seven others place an even larger weight on sales. Some states even use a sales-only formula (which was approved for Iowa by the Supreme Court).[21]

In addition, a formula that relies relatively heavily on sales is likely to be conducive to international coordination of apportionment systems. Because of the widespread belief that imposing taxes on imports and exempting exports boosts national competitiveness and reduces trade deficits, if a large trading country such as the United States were to adopt an apportionment that depends largely on sales, other countries are likely to perceive it in their interests to follow suit. It would also be in these countries' economic interest to avoid the implicit tax on assets and payroll that is embedded in formula that relies excessively on those two factors.[22] This built-in incentive for sales-based formulas would minimize the likelihood of over or under-taxation due to disparate formulas, an obstacle to adopting formulary apportionment.

We should note that in spite of the factors that are likely to cause countries unilaterally to move toward coordination with a "first mover" in the implementation of a formulary system that weights sales heavily, it would be ideal to have international cooperation and consensus regarding both the adoption of a formulary approach and the choice of formula. We will discuss below the problems that arise if only the U.S. were to adopt FA, or if different countries use different formulas. Although we do not believe that these problems justify delay in implementing the proposed approach under U.S. law, and we believe that it will be in the self-interest of most countries to follow the U.S. lead in this instance, the United States should seek as high a level of international coordination as is practical. The United States should not, however, state as a policy that it will implement a more formulary system only if international consensus can be achieved. Such consensus will never be forthcoming – especially from those low-tax countries that profit from the current system – and waiting for such consensus will mean that meaningful reform can never be accomplished.

B. Five Key Advantages to a Formula-Based Profit Split

The most important advantage of a formula-based profit split is summarized above: (i) the "arm's length" system is based on a mistaken view of the operation of multinational groups, so that the search for

21. Moorman Mfg. Co. v. Bair, 437 U.S. 267 (1978).

22. In the last 50 years, over 100 countries have adopted the VAT, and every single one of them (including all other members of the OECD) has adopted the destination principle (i.e. imposing VAT on imports and rebating it on exports). The spread of destination-based VATs around the world provides a good example of how tax innovations can spread without a coordinating supra-national agency or "world tax organization," simply on the basis of countries' perception of their self-interest.

"comparables" that the arm's length system requires is incapable of producing useful results; and (ii) the resulting inability of either taxpayers or tax agencies to discern standards for enforcement means that enforcement is impossible. In the resulting uncertainty, firms find many ways to use accounting and legal techniques, particularly the licensing of intangibles, to shift income to zero- or low-tax countries in which the multinational groups perform little if any real economic activity.

Under the proposed system, tax liabilities are based on a multinational group's global income, and the share that is taxed by a national jurisdiction depends on the fraction of the group's observable economic activity that occurs in a particular country. There is no need for massive economic studies that try to "estimate" arm's length prices in the absence of meaningful benchmarks. Thus, while a truly precise definition and measurement of economic value is likely unattainable, the proposed system provides a reasonable, comparatively administrable, and conceptually satisfying compromise that suits the nature of the global economy.[23]

The second advantage associated with the proposal is that it eliminates the tax incentive to shift income through legal and accounting devices, such as licenses of patents and other intangible property, to subsidiaries in zero- or low-tax countries. As such income shifting incentives often entail the movement of employees and plants outside the United States in order to give "substance" to the income shifting that is achieved on paper, removing the incentive for shifting through licenses and the like will also result in less tax-distorted decisions regarding the location of economic activity. By eliminating the opportunity to shift income merely "on paper," and thus also reducing incentives to move jobs and plants overseas, the proposed approach should eliminate the kinds of profit distortions that are so clearly visible in Figure 2.[24]

By reducing the ability of "tax haven" countries to attract income from other countries' tax bases, an approach like that proposed here should help governments around the world set their tax policies more independently. The wishes of voters in each government influence the ideal size of government, required revenue needs, and the allocation of the tax burden among subgroups within society. Under the proposed approach, governments will be better able to choose their own corporate tax rates based on their

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23. If a sales-based formula is adopted, both U.S. and foreign-based MNEs would be able to locate their headquarters (which frequently produce positive externalities, such as those that flow from R&D) in the United States without substantially increasing their tax burdens.

24. A very similar pattern is apparent in other years. The BEA data are discussed further in Appendix A.

assessments of these sorts of policy goals, rather than the pressures of tax competition for an increasingly mobile capital income tax base.

The third advantage associated with the proposal is the massive increase in simplicity that this would enable for the international tax system. If an approach such as that proposed here were adopted by our major trading partners, simplification gains would be particularly large, but simplification would still exist even if the approach was adopted unilaterally. To determine U.S. tax liability, there would be no need to allocate income or expenses among countries, resulting in far lighter compliance burden for firms. Subpart F and the foreign tax credit, which are both hugely complicated and a major source of transaction costs for US-based MNEs, can be greatly simplified, since there will be greatly reduced opportunities for deferral of business income under this system (which is essentially territorial and treats U.S.- and foreign-based MNEs alike).

The likely administrative savings from abandoning the current cumbersome transfer pricing regime are huge. The current regime consumes a disproportionate share of both IRS and private sector resources. For example, several recent Ernst and Young surveys of multinational firms have concluded that "transfer pricing continues to be, and will remain, the most important international tax issue facing MNEs." (Ernst and Young, 2006.) Seventy percent of their respondents feel that transfer pricing documentation has become more important in recent years, and 63% of respondents report transfer pricing audit activity in the previous three years (Ernst and Young, 2005). A very recent Ernst & Young (2008) survey reports: "Among non-U.S. owned organizations, by far the single most significant concern is with transfer pricing and its documentation." For the government, audit costs are several (three to seven) times higher for federal transfer pricing cases than for state formula apportionment audits.[25]

Judicial opinions in transfer pricing cases run to hundreds of pages each, and litigation can involve billions of dollars in proposed deficiencies, such as in the recently settled Glaxo case ($9 billion in proposed deficiency, settled for $3.4 billion) and the Aramco advantage cases (litigated and lost by the IRS, which asserted deficiencies of over $9 billion). There is no indication that the 1994 regulations under IRC section 482 have abated this trend (Avi-Yonah, 2006).

The contemporaneous documentation rule adopted by Congress, which requires taxpayers to develop documentation of their transfer pricing methods at the time the transactions are undertaken rather than when they are challenged on audit, as well as the complexity of the new SA methods (such as the Comparable Profits Method, or CPM), have led the major accounting

25. See Dan R. Bucks and Michael Mazerov "The State Solution to the Federal Government's International Transfer Pricing Problem." Nat'l Tax J. (1993), 46(3), 385-92.

firms to develop huge databases and expertise in preparing transfer pricing documentation for clients. This imposes large costs on major U.S. multinational corporations (Durst and Culbertson, 2003). Meanwhile, small and medium businesses, which cannot afford the major accounting firms, are left to fend for themselves.

By contrast, the approach suggested here is relatively simple since it requires only (1) defining activities (discussed below) and (2) establishing the standard return on expenses and the destination of arm's-length sales of goods or services. Once these two elements are established, the resulting formula permits both taxpayers and the IRS to determine the correct tax liability for each jurisdiction.

For small and medium sized businesses in particular, the proposed approach will result in major cost savings as well as the potential for paying less tax (since such businesses are rarely in a position to take on the IRS under the current system). For major multinational firms, the proposed approach also offers the prospect of avoiding the costs of contemporaneous documentation, and while some firms may pay more tax than before, many would welcome the opportunity of paying a single, low rate to each jurisdiction in which they do business (especially if the adoption of this proposal is coupled with a reduction in the corporate rate), instead of having to cope with the complexities and costs of separate accounting. Of course, some firms – i.e., those that have had the greatest opportunity to shift income under the current system – will be hurt by the change in tax environment; these issues are discussed below, in Section IV.

The fourth advantage associated with the adoption of a formulary approach for the United States is that the new system would raise more revenue, enable a substantial rate reduction, or both. Estimating how much revenue such a change would raise is a difficult and imprecise task, and the details of the implementing legislation and regulations would likely be influential in determining the ultimate effects of the proposed change. Still, previous studies and some preliminary calculations suggest that such a change is likely to generate substantial additional U.S. government revenue.

Appendix A reviews several such calculations in more detail. For example, one simple approach is to assume that multinational firms will subsequently have U.S. income shares that are the same as their U.S. sales shares; this would imply an increase in U.S. corporate tax revenues of 36% in 2005. A second (and more complex) approach is to utilize regression analysis to relate profitability to tax rates, and then estimate resulting changes in revenues by removing such tax responses. This approach, taken by a recent study, finds that tax avoidance activities reduce corporate income earned in the United States by over $180 billion in 2004, resulting in corporate tax revenues that are about 35% lower. Since our proposed formulary profit split approach would eliminate tax avoidance incentives, one would expect it to raise revenues by a similar order of magnitude (although our proposal's departure from a pure sales-based apportionment will mean some differences in results).

A final approach is that taken by Shackelford and Slemrod (1998); they use accounting data in financial reports for 46 U.S.-based multinational corporations over the period 1989 to 1993 to estimate changes in revenue under a three-factor FA system. They find that U.S. government revenues from the corporate income tax would increase by 38%. This increase is not dependent on any particular factor, and they calculate that a single factor sales formula would increase revenues by 26%. Given the changes in the international tax environment since the time period of their data, and in particular the increasing discrepancy between the U.S. corporate tax rate and those of other major countries, these estimates likely understate the potential U.S. revenue gain from a proposal such as that offered here. Still, a recent attempt to replicate the results of Shackelford and Slemrod using more recent data found a smaller revenue effect; this surprising finding may be due to increased discrepancies between book and tax income in recent years; see Appendix A for more details.

Table 1 shows illustrative statistics on the operations of U.S. multinational affiliates in 2005 for all countries where the Bureau of Economic Analysis reports data and where affiliate operations are at least one-half of 1% of world-wide totals in either sales or income. Column 1 shows the share of worldwide foreign affiliate sales that occur in each country, column 2 shows the share of worldwide affiliate net income earned in each country, column 3 shows the effective tax rate, and column 4 shows the percentage by which the income share exceeds or falls short of the sales share. Countries are shown in descending order of values for column 4, and it is immediately apparent that those countries with income shares that vastly exceed their sales shares tend to be very low-tax countries, and those with sales shares that exceed their income shares are typically high-tax countries. Thus, it appears quite likely that a sales-based formula apportionment system would increase revenues in comparatively high-tax countries, decreasing them in low-tax countries.

As one plausible conjecture, if revenues increase by 35% with formula apportionment, one can also calculate the tax rate reduction that would be possible with a revenue-neutral implementation of the proposal suggested below. In that case, the implied new corporate tax rate would be 26%, nine percentage points lower than the current corporate tax rate of 35%. Of course, one could also pursue an intermediate policy that allowed a smaller rate reduction and also increased revenues more modestly. Appendix A provides more background on these calculations.

Therefore, adoption of FA can help address the four flaws in the current system of U.S. taxation that were discussed in Section II of the paper. There are also potential gains due to coordination with other taxes as well as coordination among countries. Consider first coordination with value added taxes. Existing VATs around the world depend on defining the destination of sales of goods and services. Determining destination for goods is relatively easy because of customs enforcement. In fact, many jurisdictions use harmonized rules for customs, VAT and income tax collection. Determining destination for services is harder, but countries have developed significant expertise in it under VAT.[26] If the United States adopts a sales-based apportionment formula, it can learn from this experience even without adopting its own VAT. If the U.S. subsequently adopts a VAT, the rules for determining sales destination under FA can be coordinated with the VAT rules. In addition, existing U.S. regulations already define destination and origin of goods for purposes of trade regimes, tax-based export subsidies, and under the base company rules of subpart F.

This proposal also introduces the possibility of gains from coordination with other countries. The EU Commission is actively working on defining a common tax base and apportioning it among member states by formula. We can learn from this effort (which itself learned from the U.S. state and Canadian province experiences).[27] Also, if the United States and the European Union both adopt formulary approaches, there is obvious potential for coordinating their efforts through the OECD. It may in fact be possible, given current discussions of FA within the EU, to reach agreement with the EU (and possibly with other OECD members) on the adoption of a new system before it is actually implemented.

Still, while an international agreement would be ideal, we do not, again, believe that reaching such an agreement should be a necessary prerequisite to the United States adopting a formulary-based profit split unilaterally. Many significant advances in international taxation, such as the foreign tax credit and CFC regimes, as well as more problematic developments such as the current transfer pricing methods, resulted from unilateral action by the United States, which was followed by most other jurisdictions and by the OECD. The distortions and revenue losses of the current system are too serious to permit delay until the perhaps-impossible goal of international consensus can be achieved.

26. OECD, Report: The Application of Consumption Taxes to the Trade in International Services and Intangibles, CTPA/CFA (OECD 2004); EU VAT Directive 2006/112/EC (EU 2006), as revised in EU 2007; OECD, Applying VAT/GST to Cross-Border Trade in Services and Intangibles, Emerging Concepts for Defining Place of Taxation (OECD 2008).

27. See Joann Martens Weiner "Formulary Appointionment and Group Taxation in the European Union: Insights from the United States and Canada." European Commission Taxation Working Paper no 8. (Mar. 2005).

IV. ADDRESSING THE DOWNSIDES OF FORMULARY APPORTIONMENT: A PRACTICAL STATUTORY APPROACH

This section of the paper will consider the concerns that typically are raised with respect to adoption of a more formulary apportionment system, and will describe how the statutory language that is proposed here would address those concerns. The concerns fit into four broad categories. First, some critics argue that FA is inherently arbitrary. Second, there are implementation issues associated with the definition of activities and the determination of the location of sales. Third, there are problems associated with interactions between countries with incongruent corporate tax systems. There is a potential for zero or double taxation. Accounting standards across countries are not uniform, and tax treaties may need modification. Finally, the proposed system is likely to affect some stakeholders adversely, as some domestic industries and firms will find that their tax obligations will increase under the new system.

A. Is Formulary Apportionment Arbitrary?

Some would consider basing the corporate income tax liability largely on a routine return to expenses and the extent of sales in a particular country to be arbitrary. Still, it is not clear that the current SA regime is less arbitrary given the incentive to shift profits to low-tax jurisdictions. Under the current regime, it is quite possible that a MNE will not pay taxes either in the location of production (because of tax competition and production tax havens) or in the location of distribution (because it can avoid having a permanent establishment or minimize the profits attributable to the distribution function), while any tax due to its residence jurisdiction is subject to deferral or exemption. Such a result is more arbitrary than consistently assigning profits to the market jurisdiction, especially if most countries adopt similar formulas.

It is true that any formula can produce arbitrary results in a given industry. For example, the oil industry has long argued that it is unfair to tax it based on payroll, assets or sales because most of its profits result from the oil reserves themselves, which are not reflected in the formula (since they are typically not assets of the company for any length of time). However, while some industries will lose under the proposed formula, others (such as major U.S. exporters) will win, and most taxpayers would gain from the increased simplicity and transparency of the FA regime. If companies are willing to pay one level of tax and are only concerned about double taxation, they should be willing to accept the FA option, which prevents double taxation but also double non-taxation.[28]

B. Implementation

1. Statutory Proposal

The statute below (Appendix C) is modeled closely on the residual profit split method of the current U.S. transfer pricing regulations and the OECD Guidelines. It has obvious "formulary" elements, but it avoids the problem of distorting international investment patterns by basing the apportionment of "residual" income on the international division of sales revenues, rather than "property" and "payroll." (Property and payroll figure indirectly in the apportionment of "routine" rather than "residual" income under the statute through their effects on a party's expenses). Most importantly, the statute avoids the two elements that have caused the current regulations and their predecessors to fail: namely (i) reliance on "uncontrolled comparables" and (ii) "functional analysis" based on the taxpayer's facts and circumstances.[29]

A central challenge of implementing the proposed statute (or any statute with formulary elements) will be to deal effectively with the need to determine the geographic distribution of a party's sales revenue. The need to distinguish sales for final use as opposed to storage or transshipment, and the difficulties of determining locations for sales of raw materials and intermediate goods, intangible property and certain services (e.g., financial

28. It can also be argued that "ignoring intangible property," which is the source of most of the value added by MNEs, is arbitrary under both our formula and the state formulas (that do not include intangibles in the property factor). But intangibles do not have a real location, and their value inheres in the whole MNE, which is why they cannot be adequately addressed under SA. Any formula that "ignores" intangibles in fact assigns their value to the entire MNE (divided based on the other factors used in the formula), and we believe this result more accurately reflects the nature of intangibles.

29. The approach proposed below, which depends heavily on the geographic locations of various activities, can be applied only to apportionment of income among geographic areas, and cannot be used for apportionment of income within a single jurisdiction – for example, between related companies that do not file consolidated returns under a single country's rules, or between related taxable and tax-exempt entities located in the same country. As indicated in the attached proposed statute, it is anticipated that an "arm's length" approach will need to be retained for domestic use, although that system could be greatly simplified if it is used only for domestic apportionment purposes (e.g., by using safe harbors in lieu of comparables searches when determining markups in pricing the provision services).

services), will require toleration of some degree of reasonable estimation and generally will require some restraint in enforcement. In addition, owing to the wide range of situations in which sales can arise, regulations will need to be detailed, and a rulings process will be needed to provide flexibility for particularly difficult situations. The administrative challenges involved in determining the geographic distribution of sales revenue should be relatively limited compared to those posed by the virtually endless need for fact-finding under current rules, but the challenges nevertheless should be understood and foreseen. A reformed transfer pricing system should provide many advantages, but it will not lead even remotely to perfection.

The proposed statute incorporates provisions that are designed to address the following substantive and procedural issues:[30]

(i) determining a reasonable "routine" rate of income without the need to search for comparables and engage in functional analyses;
(ii) determining where, geographically, "sales" occur and "expenses" are incurred and protecting those determinations from artificial distortion;
(iii) defining the group of activities to which the new method is to be applied;
(iv) coordinating the new statute with existing income tax treaties;
(v) coordinating the new statute with rules for apportioning interest expense;
(vi) coordinating the new statute with rules governing withholding taxes on interest, royalties and dividends;
(vii) providing simplified rules for small-business taxpayers; and
(viii) providing for regulatory and other guidance, including private letter rulings to deal with difficulties in applying the various definitions that will be required under a revised statute.[31]

In addition to the text of the proposed statute, Appendix __ to this article provides, both in footnotes and in the examples, explanatory language

30. Overall, as Internal Revenue Provisions go, the suggested statutory language is relatively (although certainly not unprecedentedly) complicated, but it is dramatically less complex than the regulations that have been issued and continue to be issued under § 482.

31. With respect to this final point, an aspect of the proposed statute that might prove controversial is that private letter rulings granted under the new system (for example, rulings determining how "revenues" will be defined in a particular instance) would be subject to the same degree of public disclosure as other private rulings (i.e., with taxpayer identifying information removed), thus effectively removing the special exceptions from disclosure that Congress has provided for advance pricing agreements in §§ 6103(b)(2) and 6110(b)(1)(B) of the Internal Revenue Code.

that might be suitable for inclusion in congressional committee reports and in regulations. A question in drafting any complex tax statute is the degree of specificity that should be set forth in the statute as opposed to being reserved for regulations. While the desire for flexibility in administration often favors reserving large areas for regulation, the following statute includes a good deal of detail in the statutory language itself. Legislative drafters might well want to change this balance; in this article, however, we have retained significant specificity in the statute largely in an attempt to illustrate the nature of the issues that will need, one way or another, to be addressed in detail.

2. Interactions Between Countries with Different Tax Systems

It would be ideal for most major countries to coordinate implementation of FA and to come to a joint agreement on the definition of the formula for apportioning global income. Given that the European Union (EU) is already pursuing the possibility of FA within Europe, a natural forum for reaching international consensus on these issues would be the OECD. With international cooperation, the possibility of double or non-taxation would be reduced and there would be less room for multinational firms to respond strategically to variations in country formulas.

Even without formal cooperation, however, unilateral adoption by the United States of a reformed system for taxing international income would create a powerful incentive for other countries using separate accounting to adopt similar new systems. In a world with both formulary and separate accounting system countries, formulary countries will immediately appear as tax havens from a separate accounting country perspective. For example, a multinational firm operating in both separate accounting and formulary countries would have an incentive to book all their income in formulary countries, as the tax liability in such countries does not depend on the income booked there, but rather the fraction of a firm's activities in that location. Such responses would likely greatly reduce the tax revenues of remaining separate accounting countries. Thus, separate accounting countries will have a strong incentive to adopt formulary approaches, particularly if large economies adopt formulary approaches.

Moreover, the experience of the U.S. states amending their formulas to emphasize the sales factor, and the experience of over 100 countries adopting the destination-based VAT, and a number of other experiences in the development of international tax law, suggest that there is a significant likelihood that if the U.S. were to adopt a sales-based formula, other countries would be inclined to follow suit. The U.S. led the way in adopting the foreign tax credit (1918), Subpart F (1962), and the current transfer pricing regulations (1968 and 1994), all of which were followed by most of our major trading partners and recognized by the OECD. It is quite possible that if the U.S. adopted the proposed formulary split, this would be another innovation that is widely copied, with or without explicit coordination.

Still, if the United States adopts a formulary approach unilaterally and other countries do not follow suit (or follow suit much later), or if countries adopt different formulas, there is the potential for double or zero taxation. This is, arguably, the largest obstacle to unilateral adoption of a formulary system; but the significance of the obstacle should not be overstated. Although situations of double taxation or double non-taxation could arise, it is not clear that a formulary approach would produce more double or non-taxation than the current regime. The notorious absence of clear standards under the current separate accounting system means that different countries routinely reach widely disparate divisions of income under the same facts. It is hard to imagine that a reformed system, which at least provides clear quantitative benchmarks, would lead to as many double taxation, or double non-taxation, disputes as the current system already produces.

For example, the IRS recently settled a major transfer pricing case with the British firm Glaxo for $3.4 billion. This additional revenue resulted from shifting to the U.S. profits that Glaxo claimed belonged in the UK.[32] It is far from clear that the UK tax authorities would accept the result of this settlement: Under the US-UK tax treaty, they are not required to do so. (Art. 9 of the treaty only states that a country must make a "correlative adjustment" when profits are shifted by the other treaty partner if it agrees that the profit shift was justified.) The dispute resolution mechanism in most of our tax treaties does not provide for binding arbitration and therefore does not necessarily lead to a resolution. As Justice Brennan observed in the Container case (approving California's application of worldwide FA to US-based MNEs), it is not clear which method (FA or SA) produces more over- or under-taxation, even when some countries use FA and the others use SA, or when different formulas are used.[33]

In summary, with respect to the potential problem of double taxation, it must be remembered that the current system, which typically provides only wide ranges of potential "answers" to any given transfer pricing issue, often results in very divergent positions being taken by different countries, even when both countries ostensibly are applying the same "arm's length" principles. Therefore, as a starting point, it should not be thought that a revised section 482 would move us from a system without

32. For news reports describing the Glaxo matter, see Glaxo Preparing to Litigate Transfer Pricing "Heritage Product" Dispute in United Kingdom, Daily Tax Report, Mar. 7, 2007, at I-3; and GlaxoSmithKline to Pay $3.4 Billion To Settle Largest Dispute in IRS History, Daily Tax Report, Sept. 12, 2006 at GG-1.

33. Container Corp. v. Franchise Tax Board, 463 U.S. 159 (1983).

substantial double taxation to a system with double taxation; in fact, it is not at all clear whether adoption of a statute like that below would lead to more or less danger of double taxation. Of course, to the extent other countries, particularly those within the European Union, develop formulary systems of their own, a formulary approach by the United States would fit well into an international system for avoidance of double taxation.[34]

In order to evaluate the question of double taxation during the period when a U.S. formulary system might be mixed with arm's length systems in other countries, it should be recognized that those multinational groups that have, to date, adopted tax-minimization structures involving transfer pricing typically have sought to minimize their taxable incomes in all high-tax countries in which they operate, not only the United States, and to shift income into low- or zero-tax countries. As a result, a unilateral move by the United States to a formulary system is not likely to increase disputes with other high-tax countries; rather, it is likely to increase disagreements with low-tax countries that have sought actively to attract income and business from the United States. It is not clear that avoidance of these kinds of tax disputes constitutes a valid reason to delay reform of the U.S. transfer pricing rules.

It nevertheless needs to be recognized that a unilateral move to a formula-based approach is likely to result in political controversy with the low-tax countries,[35] and because the interests of those countries will coincide with those of companies that seek to retain the subsidies implicit in the current system, those governments may find themselves in political alliance with multinational companies themselves. How to resolve the resulting controversy is a question that will need to be resolved by Congress – but the

34. The support among many countries for the CCTB suggests that political attitudes in some countries have changed substantially since the early 1990s when, as described in Michael C. Durst and Robert E. Culbertson "Clearing Away the Sand: Retrospective Methods and Prospective Documentation in Transfer Pricing Today." (2003) Tax Law Review, 57. 37-84 at 80-81, international officials generally opposed actions that might lead to a more formulary transfer pricing system. Today, dissatisfaction with current transfer pricing rules appears widely shared internationally, as evidenced by government officials' expressions of concern with "restructurings" around the world. The OECD Committee on Fiscal Affairs is now devoting substantial attention to problems posed by "restructurings." See Committee on Fiscal Affairs, Organisation for Economic Cooperation and Development, Discussion Draft on the Transfer Pricing Aspects of Business Restructuring, Sep. 19, 2008.

35. The government of Ireland, for example, currently is opposing the CCTB proposal within the European Union.

controversy should be recognized as primarily political in nature.[36] Overall, it would not appear that concerns about "double taxation," significant though they may be, should be sufficient to deter Congress from taking action that could substantially improve the efficiency and apparent fairness of the U.S. international tax system.

3. *Defining the Tax Base*

It would, of course, be desirable for a U.S. move to a formulary system to be accompanied by international coordination of the tax base. A common definition of the tax base (as opposed to harmonized tax rates, which are unlikely as well as undesirable) is plausible to achieve because MNEs already use uniform accounting for world-wide financial reporting purposes. Thus, it is quite possible to use financial reporting as the starting point for calculating the global profit of the MNE, to be allocated to jurisdictions based on the FA formula. While there are still differences in accounting among countries, those are diminishing due to the spread of International Accounting Standards, which have been adopted in the EU and Japan. Further, the U.S. Securities and Exchange Commission announced in August 2008 that it would allow some large U.S. multinational firms to begin using international accounting standards as early as next year, and eventually require all American companies to do so. Alternatively, it may be possible to let each MNE use its home country's accounting methods for calculating the global tax base (as suggested by the EU Commission for inter-EU purposes).[37] Such changes would also have the advantage of more closely aligning book income and tax income. This could act a damper on both the underreporting of income for tax purposes as well as the overstatement of income for the purpose of signaling profitability to financial markets.[38]

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36. A resolution of this political issue might be aided through transitional rules, for example rules permitting U.S. multinationals to receive foreign tax credits, for a limited period of time (perhaps with a phase-out) for taxes paid by affiliates to foreign governments, provided the taxes are imposed at statutory rates not exceeding a specified maximum (such as 15%) that would be based on the practices of particular low-tax countries.

37. See EU Commission, Company Taxation in the Internal Market, COM (2001) 582 Final (2002), 13.1.

38. This is discussed in Mihir Desai "The Degradation of Reported Corporate Profits." Journal of Economic Perspectives, 19(4) 171-192 (Fall 2005), where he recommends reconsideration of the dual-reporting system. Desai (2003) reports an increasing divergence between book income and tax income, with more than half of the divergence not explained by conventional differences between the measures. For the United States in 1998, he estimates that this discrepancy amounts to about 34% of tax income (just over $150 billion), and he attributes these trends to increased tax sheltering activities.

However, if coordination of the tax base with accounting-based measures were unachievable or undesirable, the proposed formulary approach could also be implemented unilaterally by the U.S. using its definition of taxable income and applying it to the entire MNE. U.S.-based MNEs already have to calculate the earnings and profits of CFCs for purposes of Subpart F and the foreign tax credit, so the additional information required for unilateral adoption would not be overly burdensome. For non-U.S. based MNEs, the U.S. system could use financial reporting to shareholders (already required by the SEC or by home country regulators) as the base for calculating worldwide income. While this would create a disparity between U.S. and non-U.S. based MNEs, the disparity would probably be no more significant than it is under current transfer pricing regimes around the world, which often must operate from measures of income as determined under local accounting systems.

Concern is sometimes expressed that a transfer pricing system depending on application of an apportionment formula to global income will require the IRS to gain access to information on both U.S. and foreign multinational groups' operations outside the United States. Current transfer pricing law, however, already requires access to such information, both in the application of the profit split method and in the course of examinations. Indeed, current law requires both U.S. and foreign companies to retain and provide on request to the IRS voluminous information on non-U.S. operations.[39] There is no way to avoid offering national tax administrations access to information on activities in other jurisdictions.

4. *Interaction with Tax Treaties*

Some have argued that tax treaties will need modification with adoption of formulary apportionment. However, it is not clear that existing U.S. tax treaties will have to be renegotiated, at least in the short term.

Transfer pricing is currently governed by Article 9 of the treaties, which seems to assume the SA method because it addresses the commercial or financial relations between associated enterprises. In addition, Article 7 of the treaties provides generally for the application of SA principles in apportioning income among branches of single corporations – a technically complex topic not directly addressed in this article, although it raises issues similar to those raised when dealing with apportionment among separate affiliates.

There can be no question that historically, both Article 7 and Article 9 have been interpreted as incorporating "arm's length" concepts such as resorting to supposed "comparables," and the other accoutrements of

39. IRC §§ 6038A and 6038C and regulations thereunder.

attempted transfer pricing administration under the SA regime. There is no reason, however, why the United States and its treaty partners could not agree, under the "competent authority" process contained in each treaty and discussed above, to interpret their treaties to accept the reformed apportionment approach as the closest feasible, and administrable, approximation to the "arm's length" results envisioned in Articles 9 and 7. Except for low-tax, "tax haven" countries, one would expect many if not most U.S. tax treaty partners eagerly to accept such an approach, since these treaty partners face the same difficulties in enforcement and administration of transfer pricing rules that the United States faces.

There may, to be sure, be some countries that will insist on retaining the current SA-based analysis in their treaty dealings with the United States. In such instances, case-by-case negotiation will be necessary in order to avoid double taxation – but such negotiations are required to an unacceptably large extent even under the current system, the vagueness of which leads to numerous conflicts among tax jurisdictions over particular cases. The attached proposed legislation includes provisions designed to ensure that U.S. negotiators have authority to interpret U.S. tax treaties as authorizing the proposed reformed transfer pricing methodology in double taxation negotiations with treaty partners.[40]

One can expect low-tax countries, as well as those multinational businesses that are favored under the current transfer pricing regime, to assert vigorously that the new regime is in violation of income tax treaties. Such assertions will, however, reflect disagreement with the reformed system on policy grounds, rather than reflecting any serious impediment in the tax treaty system to the adoption of the new system. Political opposition to the reform from low-tax countries and from businesses that will pay relatively larger shares of the corporate tax burden must be respected and dealt with – but such political opposition should be recognized for what it is.

C. Negative Effects on Some Corporate Stakeholders

Analysts have noted that adoption of FA would disproportionately affect some industries and firms negatively. For example, Shackelford and Slemrod (1998) find that FA raises tax liabilities for some industries and firms, lowering burdens for others. They estimate that the oil and gas industry would see an increase in tax liabilities of 81% under FA, compared with 29% for all other firms in their study. (The mean oil and gas company

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40. This language, by manifesting congressional intent that the reformed system should be treated as acceptable under existing U.S. income tax treaties, should preclude successful invocation of treaties in judicial challenges to application of the new system. See Nat'l Westminster Bank PLC v. United States, 512 F.3d 1347 (Fed. Cir. 2008).

in their study reports 68% of assets in the United States, 70% of sales in the United States, and 78% of total compensation paid to U.S. employees, but such companies book 42% of pretax earnings in the United States.) The authors also estimate that some firms will experience a tax decrease, including Boeing and Procter and Gamble. The update of Clausing and Lahav (2008) suggests a similar pattern, with tax increases for oil companies (e.g.) and tax decreases for Boeing, Procter and Gamble, and Intel.

Under our proposal, firms with a disproportionate amount of U.S. sales relative to U.S. income would see tax increases under FA, while those with relatively low U.S. sales compared to U.S. income (e.g., large exporters) would see tax decreases. In addition, firms that derive their income largely from high-value technological intangibles would likely be adversely affected by adoption of FA, as these firms have the greatest opportunities for lowering their tax burdens under the current system. Indeed, Clausing and Lahav (2008) predict tax increases for some intangible-intensive firms like Pfizer and Johnson Controls, but also tax decreases for others such as Walt Disney and 3M.

Also, negative impacts may be muted by several considerations. First, firms will benefit from reductions in complexity and compliance burdens. Small and medium size businesses should be particularly appreciative of such benefits. Second, accompanying the adoption of a more formulary system with a reduction in the corporate income tax rate would increase the number of firms benefiting from the adoption. A rate reduction would also appeal to those concerned that the U.S. is losing competitiveness because of the current rate disparity.

V. CONCLUSION

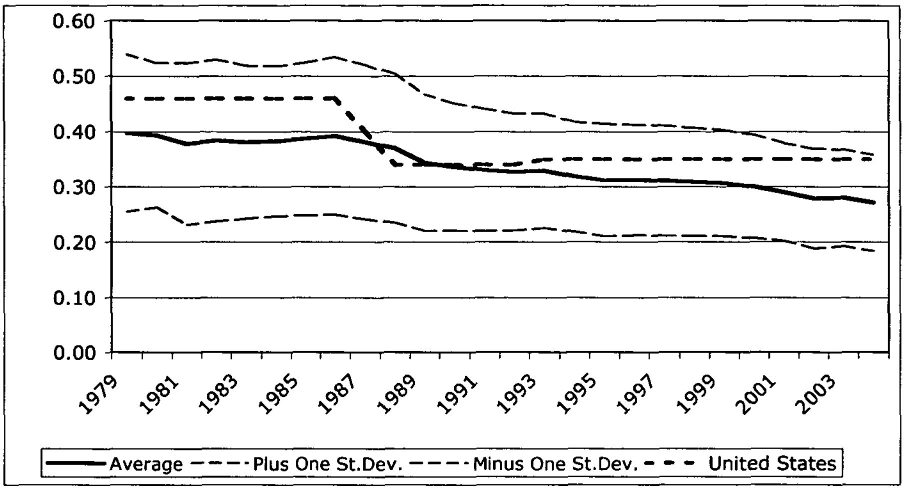
Our proposal for the adoption of a formula-based profit split for the U.S. taxation of corporate income responds to the reality of an increasingly global world. Multinational firms have internationally integrated operations, and they are responsive to the incentives created by discrepancies among national tax policies. A separate accounting system generates an artificial need to assign income and expenses by location, and this creates ample opportunities for tax avoidance.

The proposed system would greatly reduce the complexities associated with sourcing income and expenses across locations, and it would eliminate the incentive to use legal and accounting techniques to shift income to more lightly-taxed locations. Further, because these legal and accounting techniques often involve moving jobs and plant overseas to support the "substance" of the techniques, eliminating the techniques would reduce tax-motivated shifts of employment and investment outside the United States.

By eliminating opportunities to shift income from the United States, the proposed approach would increase U.S corporate tax revenues would likely increase significantly. Alternatively, the proposal could be implemented in a revenue neutral fashion, allowing for a dramatic reduction in the corporate tax rate.

Those who benefit from the current system are certain to proclaim, loudly, what will be described as terrible difficulties of moving to a reformed system, but on close analysis the obstacles to effective reform appear surmountable. Perhaps the most significant objection to adoption of a reformed system is that such a step would entail conflict with some U.S. tax treaty partners. In all likelihood, however, such conflict would involve almost entirely those treaty partners that have chosen to adopt unusually low corporate income tax rates in an effort to attract investment from the United States and other non-haven countries. Most other countries, which face difficulties in administering their own transfer pricing systems similar to the difficulties faced by the United States, are likely to cooperate in implementing and refining the new system. Questions of international comity do not preclude serious reform of the transfer pricing system; if the United States has the political will for such reform, it can feasibly be accomplished.

Figure 1, Panel A: Statutory Corporate Tax Rates, OECD Countries, 1979-2004[41]



41. Statutory tax rate data are from PricewaterhouseCoopers, Corporate Taxes: Worldwide Summaries. Effective tax rate data are calculated as foreign income taxes paid relative to net (pre-tax) income for U.S. affiliates operating in a particular country. These data are from the Bureau of Economic Analysis (BEA); they are discussed further in Appendix A.

Panel B: Average Effective Tax Rates, OECD Countries, 1982-2004

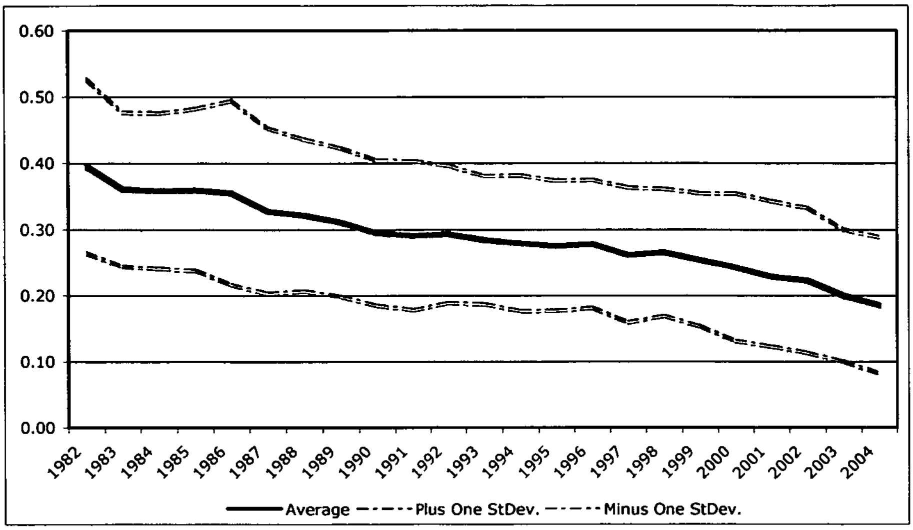
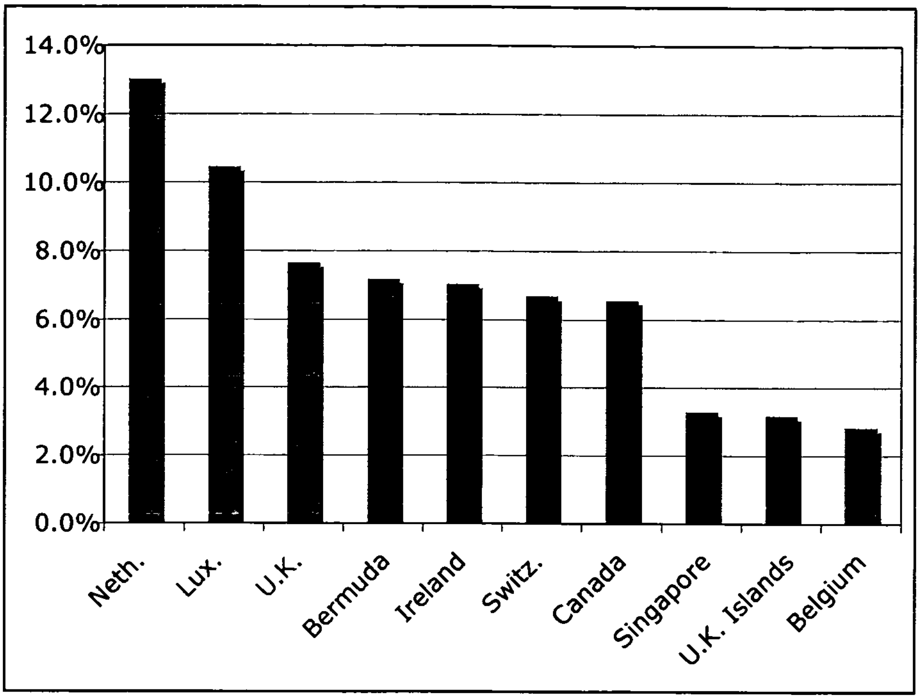


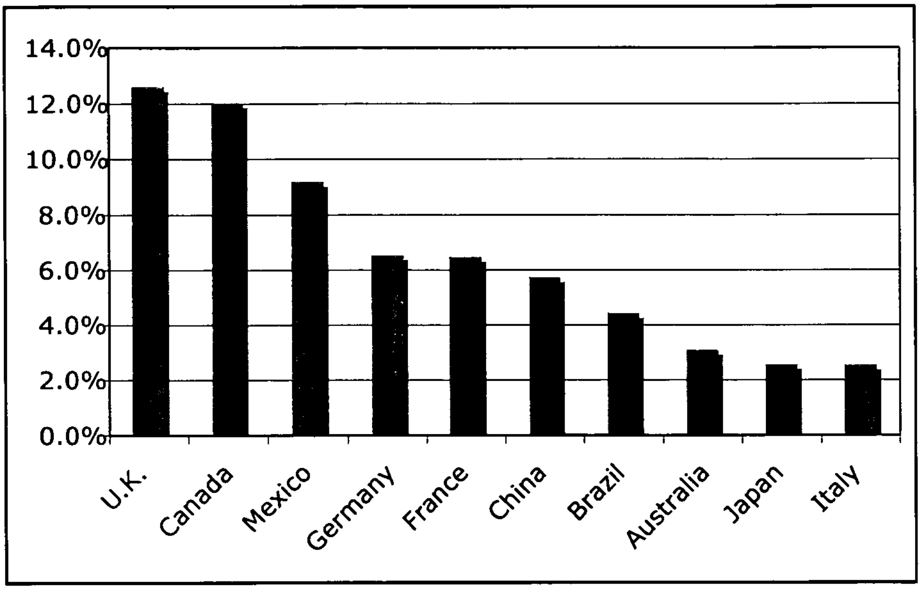
Figure 2: Where Were the Profits in 2005?
(profits as a percentage of the worldwide total)



Country	Effective Tax Rate
Netherlands	5.1%
Luxembourg	0.9%
United Kingdom	28.9%
Bermuda	0.9%
Ireland	5.9%
Switzerland	3.5%
Canada	21.4%
Singapore	3.2%
U.K. Islands	1.9%
Belgium	8.7%

Notes: In 2005, majority-owned affiliates of U.S. multinational firms earned $336 billion of net income. This figure shows percentages of the worldwide (non-U.S.) total net income occurring in each of the top-10 income countries. Thus, each percentage point translates into approximately $3.4 billion of net income. Effective tax rates are calculated as foreign income taxes paid relative to net (pre-tax) income. Data are from the Bureau of Economic Analysis (BEA) web page; 2005 is the most recent year with revised data available. The Bureau of Economic Analysis conducts annual surveys of *Operations of U.S. Parent Companies and Their Foreign Affiliates*. These data are discussed in more detail in Appendix A.

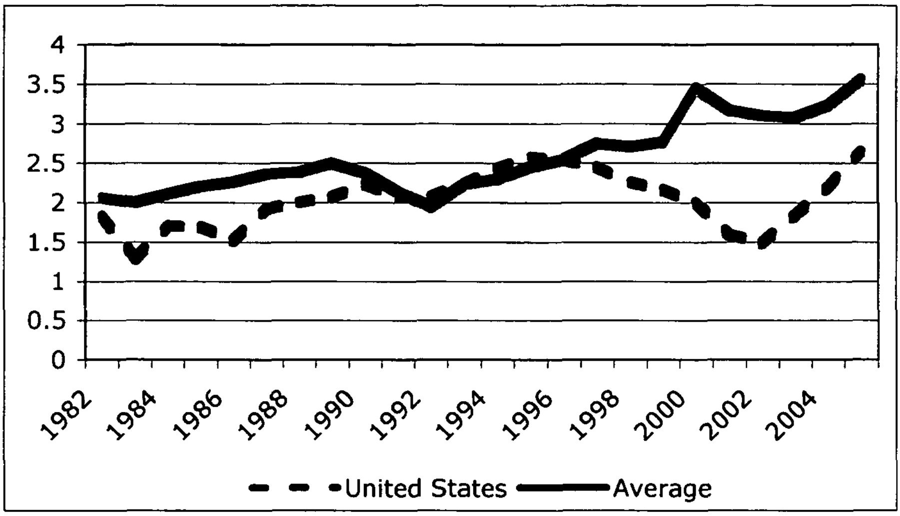
Figure 3: Where Were the Jobs in 2005?
(employment as a percentage of the worldwide total)



Country	Effective Tax Rate
United Kingdom	28.9%
Canada	21.4%
Mexico	21.8%
Germany	26.2%
France	21.3%
China	14.8%
Brazil	18.1%
Australia	12.1%
Japan	34.7%
Italy	24.9%

Notes: In 2005, majority-owned affiliates of U.S. multinational firms employed 9.1 million employees. This figure shows percentages of the worldwide (non-U.S.) total employment occurring in each of the top-10 countries. Thus, each percentage point translates into approximately 91,000 jobs. Effective tax rates are calculated as foreign income taxes paid relative to net (pre-tax) income. Data are from the Bureau of Economic Analysis (BEA) web page; 2005 is the most recent year with revised data available. The Bureau of Economic Analysis conducts annual surveys of *Operations of U.S. Parent Companies and Their Foreign Affiliates*. These data are discussed in more detail in Appendix A.

Figure 4: Central Government Corporate Tax Revenues Relative to GDP OECD Countries, 1982 to 2005



Note: Data are from the OECD revenue statistics.

Table 1: U.S. Multinational Firm Operations in 2005
(for those countries with the largest U.S. affiliate operations)

	(1) Share of Sales	(2) Share of Income	(3) Effective Tax Rate	(4) Excess Income Share (v. Sales)
Luxembourg	0.4%	10.5%	1%	2688%
U.K. Islands	0.6%	3.2%	2%	428%
Bermuda	1.4%	7.2%	1%	408%
Austria	0.5%	1.5%	2%	202%
Netherlands	4.4%	13.0%	5%	194%
Denmark	0.4%	0.7%	18%	67%
Indonesia	0.4%	0.6%	35%	62%
Ireland	4.3%	7.0%	6%	62%
Switzerland	4.3%	6.7%	3%	57%
Venezuela	0.4%	0.6%	18%	51%
Belgium	2.3%	2.8%	9%	21%
Norway	0.9%	0.8%	52%	-1%
Australia	2.5%	2.0%	12%	-19%
Singapore	4.4%	3.3%	3%	-25%
Hong Kong	2.0%	1.3%	11%	-34%
China	2.0%	1.3%	15%	-36%
Argentina	0.6%	0.4%	20%	-38%
United Kingdom	13.6%	7.7%	29%	-44%
Spain	2.0%	1.1%	17%	-47%
Canada	12.4%	6.6%	21%	-47%
Malaysia	1.1%	0.6%	18%	-49%
Japan	4.7%	2.1%	35%	-56%
India	0.5%	0.2%	22%	-57%
Korea, Republic of	1.0%	0.4%	22%	-57%
Thailand	0.9%	0.4%	30%	-58%
Mexico	3.5%	1.4%	22%	-60%
Poland	0.6%	0.2%	14%	-62%
Italy	2.8%	1.1%	25%	-63%
South Africa	0.5%	0.2%	51%	-63%
Taiwan	0.9%	0.3%	18%	-66%
France	4.9%	1.6%	21%	-68%
Sweden	1.4%	0.4%	16%	-70%
Germany	7.3%	1.8%	26%	-75%
Brazil	2.5%	0.5%	18%	-80%

Countries are selected for inclusion in this table if either their sales share or their income share exceeds one half of 1% of worldwide totals. Data are from the Bureau of Economic Analysis (BEA) web page; 2005 is the most recent year with revised data available. The Bureau of Economic Analysis conducts annual surveys of *Operations of U.S. Parent Companies and Their Foreign Affiliates*. These data are discussed in more detail in Appendix A.

Appendix A: Estimates of Revenue Gain Due to Formula Apportionment

This appendix considers methods of estimating the revenue gain to the United States government due to formula apportionment. All of these methods rely on multiple assumptions and simplifications. The data are imperfect and incomplete. Further, there are multiple margins under which this change would affect multinational firm behavior both in the United States and abroad, and there is substantial uncertainty regarding the net influence of these responses on government revenues. Finally, the actual legislation and accompanying regulations implementing FA would matter a great deal in terms of ultimate effects on revenue.

Therefore, all of these estimates should be treated with a great deal of caution, as a mere starting point for thinking about this question. That said, estimates below paint a broadly consistent picture of large U.S. government revenue gains with the adoption of formula apportionment.

1. The simplest estimate of the revenue gain relies on inferences from the U.S. Bureau of Economic Analysis (BEA) data regarding the operations of U.S. multinational firms. According to 2005 data from the BEA, U.S. multinational firms earn 52.4% of their worldwide net income in the United States. However, 67.2% of worldwide sales for these firms occurs in the United States. If the United States tax base were 67.2% of worldwide income, it would increase by $285 billion. With the increment taxed at the marginal tax rate of 35%, that would generate $99 billion in additional revenue. Since revenues from the corporate income tax in 2005 were $278 billion, that represents an increase of 36%. The following Table shows the results of the same calculations for the four most recent years with available data; 2002, however, was likely an usual year, as net income in the United States was abnormally low in comparison with other years.

	2002	2003	2004	2005
Fraction of World Sales in United States	71.6%	69.6%	68.1%	67.2%
Fraction of World Income in United States	8.2%	56.7%	51.5%	52.4%
Implied New Revenue	$79 b	$52 b	$82 b	$99 b
Implied New Tax Revenue as Share of Same Year's Federal Corporate Tax Receipts	54%	40%	44%	36%

If one assumes instead that the increment were taxed at the average tax rate that was paid on corporate profits, then this increase would be smaller. Yet in other ways, this estimate represents an underestimate of the revenue gain since it includes only U.S. multinational firms. Foreign-owned multinational firms with affiliates in the United States would also face changes in their tax treatment that will increase revenues as long as the fraction of their worldwide sales in the United States exceeds the fraction of their worldwide income booked in the United States. While this is not possible to ascertain given the absence of BEA data on foreign parent firms, profits do appear to be disproportionately low for these firms relative to their sales in the United States. For example, in 2005, net income of U.S. parent multinational firms is 8.5% of their U.S. sales, while net income for U.S. affiliates of foreign parent firms is 3.2% of their U.S. sales.

A final issue concerning these calculations is the possibility of double-counting in the BEA net income figures. These figures include "income from equity investments", some of which may be counted more than once if there are tiers of holdings within the same country. Unfortunately, from existing BEA data, it is impossible to tell exactly how large this problem is, or how much this problem is correlated with the tax rate of the country in question.[42] Using an alternative data series from the BEA on direct investment earnings, one can exclude all income from equity investments, but this too is conceptually inappropriate. Still, I performed calculations that employed this series nonetheless. To make the data comparable to net income, I adjusted for the fact that direct investment earnings were pro-rated to reflect the ownership stake of the U.S. parent, assuming an average ownership stake of 68.6% for all firms. (This was the average ownership stake in 2003.) One finds a very similar fraction of worldwide income abroad, roughly 57% in both 2003 and 2004. Estimates of revenue gain from FA are about a third smaller, due to some combination of a narrower definition of income as well as the elimination of any double-counting.

2. Clausing (2008) undertakes estimates of the revenue lost to the United States due to income shifting by U.S. multinational firms. These are based on regressions that consider how profit rates (profit to sales ratios) depend on affiliate country tax rates. For the time

42. Using German data, Weichenrieder (2006) finds no relationship between the tax rates of host countries and more complicated ownership chains. However, other tax factors are important, including whether the investing country has a credit or exemption tax system.

period 1993 to 2004, the regression results indicate that a tax rate one percentage point higher (relative to the United States) is associated with an affiliate profit rate about .8 percentage points lower. This result is used, together with information regarding profits and sales for each country and year, to calculate how profits would be different absent tax influences, and thus how revenue would be different in the United States absent income shifting.

By 2004, it is estimated that tax-motivated income shifting shifts over $180 billion in corporate income out of the United States, resulting in 35% lower corporate tax revenues; for the recent period 2001-2004, revenues are estimated to be 29% lower due to income-shifting. Some estimates are lower or higher; there are multiple assumptions that are embedded in the analysis that could cause the results to be underestimates or overestimates.

For example, results depend on the specification of the tax parameter, the econometric specification employed, assumptions regarding the residual U.S. taxation of foreign income, the nature of foreign multinational firm behavior, and assumptions regarding the share of excess foreign income earned in low-tax countries that should be attributable to the United States. Thus, the precise estimate should be viewed with caution. Still, the nature of the main findings is robust: the sign and statistical significance of the tax coefficients are always as expected, and the consequences of tax avoidance grow dramatically over the previous decade.

3. Other studies have generated estimates of a similar magnitude. The most thorough estimate is Shackleford and Slemrod (1998); they use accounting data in financial reports for 46 large U.S. based multinational corporations over the period 1989 to 1993 to estimate changes in revenue under a FA system.

Their estimates are based on firm financial statements and the related income tax footnotes. Three certified public accountants interpreted each detailed disclosure. Both domestic and foreign taxable income were estimated as the sum of the current relevant tax provisions and credits divided by the relevant statutory tax rate; worldwide income is then the sum of domestic and foreign income. The U.S. tax liability under formula apportionment is then calculated as the product of worldwide taxable income, the formula for the fraction of income allocated to the United States, and the U.S. tax rate.

The authors find that FA raises tax liabilities for some industries and firms, lowering burdens for others. They estimate that the oil and gas industry would see an increase in tax liabilities of 81% under FA, compared with 29% for all other firms in their study.

> They also estimate that some firms will experience a tax decrease, including Boeing, Procter and Gamble, and Dow Chemical.
>
> Overall, Shackleford and Slemrod (1998) find that revenues would increase by 38% under a three-factor FA system. This increase is not dependent on any particular factor, and they calculate that a single factor sales formula would increase revenues by 26%. Given the changes in the international tax environment since the time period of their data, and in particular the increasing discrepancy between U.S. corporate tax rates and those of other major countries, these estimates likely understate the current U.S. revenue gain with FA adoption.
>
> Still, Clausing and Lahav (2008) have work in progress that attempts to replicate the study of Shackelford and Slemrod, using nearly identical methods and data from the period 2005-2007. The sample is the fifty largest U.S. based multinational firms that have adequate reporting data. They find a smaller increase in revenue, of 22% in 2007 and 13% for the three year period. Given the change in the tax environment since 1989-1993, this is a surprising finding. While more work is needed to clarify this result, it may stem from the use of financial reports, rather than tax data. While Shackelford and Slemrod also use financial reporting data, Desai (2003, 2005) and others have noted increased discrepancies between book and tax income over this time period.

Any of these estimates can be used to generate an estimate of what corporate tax rate would be associated with a revenue neutral implementation of formula apportionment. Taking as one baseline that tax revenues would increase by 35% with formula apportionment, this implies that the corporate tax rate could be lowered by 9 percentage points, to 26%. Of course, one could also pursue an intermediate policy that lowered the corporate tax rate less but that also modestly increased tax revenue.

Note that all of the estimates discussed above are based on book income figures, not tax income. Numbers (1) and (2) utilize data from the BEA surveys on multinational firms; number (3) uses data from firm financial statements. It would be preferable to utilize data on tax income, which is also presumably more responsive to tax incentives; however, this is not possible absent access to Treasury data. Also note that none of these estimates address methods that firms utilize to lower their taxable income overall; the focus is instead on the sourcing of income.

Appendix B: Other Formula Choices

Section III of the paper explains the merits of employing a sales-based formula rather than the traditional "Massachusetts formula" which is an equal-weighted average of sales, payroll, and asset shares. A sales based formula has several advantages. First, firms have little ability to undertake tax avoidance strategies with a destination-based sales formula, since firms have no control over where customers are located.[43] Second, use of a sales-based formula lessens any implicit tax on payroll and assets, which can distort multinational firms' investment and employment decisions. Third, U.S. states have demonstrated a tendency to increase the sales weight over time, so adopting a sales based formula at the outset may encourage countries to adopt more uniform formulas.

Still, multiple factor formulas have some advantages. First, while the incidence of the corporate tax is a complex matter, beyond the scope of this paper, one advantage of the equal-weighted formula is that the incidence of the tax may be more desirable. For example, some argue that the asset portion of the formula is particularly compatible with the desire to have the corporate tax borne by capital. Second, some argue that a three-factor formula more adequately captures the supply side of the process that generates profit. Still, as was recognized as far back as Marshall (1890), value has its roots in both supply and demand factors, and trying to separate them is as futile as trying to determine which blade of the scissors cuts. Third, to the extent that firms are able to manipulate the destination of their sales (a problem that we think can be addressed to a large extent by careful statutory drafting; see text), a multiple factor formula would make that type of avoidance more difficult. Finally, to the extent that some countries view a sales-based formula as not suited to their interests, a formula with several factors could be viewed as a useful compromise.

In addition to a sales-based formula and an equally-weighted formula, some have suggested a formula with a double weight on sales. For example, Eichner and Runkel (2006) argue that such a formula would reduce the harmful effects of tax competition, as the fiscal externalities of corporate income taxation would be minimized.

Sorensen (2004) and Agundez-Garcia (2006) have discussed the possibility of using industry or macro-based weights in these formulas. Thus, a firm's tax liability in a particular country would not depend on its own share of worldwide activity in the country, but rather on the industry-wide average of these shares. If a firm is small relative to the industry, then its own decisions have little effect on where its tax liability is assigned. However, this method has the downside of separating a firm's activities from

43. Of course this assumes that the definition of activity is sufficient to prevent manipulation of the destination of sales. This issue is discussed in the paper.

the jurisdictions in which it incurs taxation, which would likely prove too arbitrary. In the extreme, if macro-weights were used, a firm's tax liability in a given country would depend on, e.g., the size of that country in the world economy. So if the United States were one quarter of the world economy, any firm with nexus in the United States would have a U.S. tax base equal to one-quarter of their worldwide profits, even if the particular firm did 1% (or 99%) of its activity in the United States. This is unduly arbitrary.

Appendix C: Suggested Statutory Language

Section 482. Allocation of Income and Deductions Among Taxpayers.

(a) In General – In any case of two or more organizations, trades, or businesses (whether or not incorporated, whether or not organized in the United States, and whether or not affiliated) owned or controlled directly or indirectly by the same interests, the Secretary may distribute, apportion, or allocate gross income, deductions, credits, or allowances between or among such organizations, trades, or businesses, if he determines that such distribution, apportionment, or allocation is necessary in order to prevent evasion of taxes or clearly to reflect the income of any of such organizations, trades, or businesses.[44]

(b) Income of Related Parties Resident for Income Tax Purposes in Different Countries –

> (1) In General – Except as otherwise provided in this section or in regulations, if any party participates in an activity with one or more related parties, and if such party and such related parties are resident for income tax purposes in more than one country, the income of such party from such activity, for purposes of subsection (a), shall not be treated as resulting in evasion of taxes and shall be treated as clearly reflecting such income, provided that the net operating income or loss of all related parties participating in such activity is, taking into account all payments and other transactions among such related parties, divided among such related parties so that each earns the sum of –
>
> > (A) an amount of operating income equal to a markup of 7.5% (or such other markup as the Secretary may prescribe

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44. The proposed revision eliminates what is now the second sentence of § 482, commonly called the "commensurate with income" or "superroyalty" rule:

> In the case of any transfer (or license) of intangible property (within the meaning of 936(h)(3)(B)), the income with respect to such transfer or license shall be commensurate with the income attributable to the intangible.

Under the proposed revision, the concern that gave rise to enactment of this rule – namely, that taxpayers would be able to assign the income from high-value intangibles to countries in which disproportionately little activity occurs – generally should not arise. If the propose revision is enacted, corresponding changes should be made to § 367(d), which incorporates a similar rule.

by regulation as described in subsection (d))[45] on such related party's expenses of such activity paid or incurred with respect to persons other than related parties; and

(B) a proportionate share of any income from such activity remaining after application of subparagraph (A), equal to such party's proportionate share of the revenues of all related parties that are derived from persons other than related parties from such activity.

(2) Exception if Net Operating Income is Below Specified Threshold or in Case of Operating Loss From Activity – If the combined income of all related parties from an activity described in paragraph (1) is greater than zero but is insufficient to provide all of such related parties with the level of operating income described in subparagraph (1)(A), or if the activity gives rises to a net operating loss, the income of any such related party will satisfy the requirement of paragraph (1) if the total operating income or the operating loss, as the case may be, of such related parties is shared among such related parties in proportion to their respective expenses of such activity.

(3) Accounting Methods – Except as otherwise provided in this section or in regulations, a party's revenue, expenses, operating income and operating loss, if any, shall be determined according to the accounting methods by which such party ordinarily keeps its books and records.

(4) Rules Applicable to Related Parties Resident for Income Tax Purposes in Different Countries Except as otherwise provided in this section or in regulations, for purposes of this subsection —

(A) revenues from the provision of services shall be treated as earned by the related party that is resident for income tax

45. The markup of 7.5% is prescribed based on the authors' observation that tax practitioners in both private and government practice often consider such a markup to be within reasonable ranges for many kinds of activities, and it is slightly above the 7% markup set forth as the dividing line between "low margin" and other services in recently promulgated regulations. Temp. Reg. § 1.482-9T(b)(4)(ii). It is anticipated that the Treasury will by regulation prescribe different markups for geographic locations, or particular industries, in which a markup of 7.5% does not constitute a reasonable estimate of a "routine" level of return based on prevailing market conditions.

purposes of the country in which the services are performed;[46]

(B) except as otherwise provided in subparagraph 4(c), revenues from the provision of tangible and intangible property shall be treated as earned by the related party that is resident for income tax purposes in the country in which the tangible property is consumed or placed in service for its intended use,[47] and in which the intangible property is used;[48]

(C) revenues from the provision of tangible property that is to be incorporated into other tangible property, or otherwise transformed substantially, by manufacturing or other processes prior to sale to the user or consumer of such tangible property, and revenues from the provision of intangible property that is to be used in the manufacturing of products, shall be treated as earned as follows:

(i) if the taxpayer establishes to the satisfaction of the Secretary that the income from such

46. It is anticipated that regulations will provide for different treatment with respect to advertising services. Regulations may, for example, provide that revenues from advertising in print media be apportioned based on the taxpayer's best reasonably available estimates of circulation, from advertising in electronic media based on the taxpayer's best reasonably available estimate of the distribution of viewers or listeners, or from internet advertising based on the taxpayer's best reasonably available estimate of the distribution of website visits.

47. Regulations should specify that taxpayers will be permitted to base determinations of where tangible property is consumed or placed in service for its intended use on reasonable and good faith inferences, including statistical inferences, based on information that is available to taxpayers in the ordinary course of business, such as shipping records, customs filings, market surveys and other regulatory filings (e.g., those dealing with food and drug laws or labeling requirements). The IRS should challenge such determinations only if the taxpayer appears not to have exercised reasonable care and due diligence in making estimates, or if inaccuracies in a taxpayer's determinations might materially affect the taxpayer's income that is subject to U.S. taxation.

48. For example, if a U.S. corporation licenses a patent to an affiliate in Ireland, the Irish affiliate sublicenses the patent to an unrelated party in Germany for use in the manufacture of products in Germany, the resulting royalty revenue will be treated as earned in Germany if the U.S. corporation has an affiliate in Germany, or (see proposed § 482(b)(4)(I)), if the U.S. corporation has no affiliate in Germany, the resulting royalty income will be apportioned among the members of the group according to their relative levels of expenses.

manufacturing or other processes is subject to an effective rate of income tax imposed by a foreign country greater than 90% of the maximum rate of tax specified in section 11, such revenues shall be treated as earned in such foreign country;

(ii) if the taxpayer cannot establish that the income from such manufacturing or other processes is subject to an effective rate of taxation described in subparagraph (C)(i), but if the taxpayer can establish to the satisfaction of the Secretary, with reasonably certainty, the countries in which such tangible property, following incorporation into other property or other transformation, or the property that is manufactured using such intangible property, is used or placed in service for its intended use,[49] such revenues shall be treated as earned in such countries; and

(iii) if the taxpayer cannot establish the conditions described in subparagraphs (C)(i) or (C)(ii), such revenues shall be treated as earned in the United States.

(D) revenues from the provision of banking, insurance, brokerage, or other financial services, and revenues of a kind described in section 954(c) that are attributable to particular activities, shall be treated as earned by related parties in proportion to their expenses of such activities as determined pursuant to this subsection;[50]

(E) revenues from the provision of transportation described in section 863(c), space and ocean activities described in section 863(d), and international communications described in section 863(e) shall, respectively, be treated as derived by

49. See supra note 57.

50. It is anticipated that regulations will provide that revenues for the provision of banking, insurance, brokerage, or other financial services will be treated as earned by the related party that is resident for income tax purposes in the country in which such revenues can be identified, with reasonable certainty in view of the records and other information available to the taxpayer, with services provided to individuals resident, property located, or active business activities conducted within that country.

the related parties in a manner consistent with the principles employed by those provisions and the regulations thereunder in determining the sources of such income;

(F) expenses incurred for the provision of services shall be treated as incurred by the related party that is resident for income tax purposes in the country where the services are performed;

(G) expenses related to tangible property, including but not limited to expenses for depreciation and maintenance, shall be treated as incurred by the related party that is resident for income tax purposes in the country where the property is located;

(H) expenses not otherwise described in this paragraph shall be treated as incurred by the related party that is resident for income tax purposes in the country where the benefit of such expenses is derived;[51]

(I) revenues or expenses that, under subparagraphs (A) through (H), are treated as earned or incurred in a country in which no related party participating in the activity is resident for income tax purposes shall be treated as earned or incurred, as the case may be, by all such related parties in proportion to their respective expenses (determined prior to the application of this subparagraph) that are related to the activity; and

(J) if a related party incurs expenditures that benefit more than one activity described in paragraph (1), such expenditures shall be apportioned among such activities

51. Regulations should provide that the benefit of royalties paid with respect to intangible property shall be treated as enjoyed in the jurisdiction in which property is manufactured or services are performed using such intangible property.

according to the relative benefits provided by such expenditures.[52]

(5) Exception for Activities Involving Only the Provision of Services by a Related Party. If, with respect to an activity described in paragraph (1), the only assistance or contribution provided by a related party to other related parties consists of the performance of personal services by employees or other persons (including the procurement of tangible or intangible property from unrelated persons for the benefit of a related party), then, at the election of the taxpayer, the rules for allocation and apportionment of paragraphs (1) through (5) shall not apply, and the income of any such related party from such activity, for purposes of subsection (a), shall not be treated as resulting in evasion of taxes and shall be treated as clearly reflecting such income, provided that such related party earns a markup on the expenses of performing such services equal to the markup described in subparagraph (b)(1)(A) (or such other markup as may be provided in regulations).

(6) Rule Related to the Use of Trademarks, Trade Names, and Similar Marketing Intangibles. Except as otherwise provided in regulations, the use by a party in one country of a trademark, trade name, or similar marketing intangible that has previously been used by a related party in another country shall not in itself constitute participation by the related parties in an activity for purposes of this subsection, unless one such related party has incurred or reimbursed expenditures involving the advertisement or marketing of such trademark, trade name, or similar marketing intangible, and such advertising or marketing has, under standards prescribed in regulations, been directed at actual or potential customers of the other related party.

(7) Exception for Small and Mid-Size Taxpayers. Notwithstanding any other provision of this section, and except as the Secretary shall prescribe by regulation, if a taxpayer that is a related party has made a reasonable effort in good faith to comply with the provisions of this subsection, and if the combined gross income of the taxpayer

52. Regulations should provide that the apportionment function prescribed in subparagraph (J) should follow the system of "apportionment keys" (e.g., apportionment by such factors as sales, payroll, headcount, or some other reasonable indicator of relative benefit) that is currently prescribed in the regulations under § 482 governing the pricing of services among related parties.

and of all related parties with respect to such taxpayer does not exceed $5 million dollars, then the Secretary may distribute, apportion, or allocate gross income, deductions, credits, or allowances between or among such related parties under this section only if such related party, in establishing pricing for or otherwise arranging transactions among such related parties, had as a principal purpose avoiding taxes imposed by this chapter.

(8) Exception for Interest Expense. Notwithstanding any other provision of this section, and except as provided in regulations, in determining whether the test of subsection (a) is met, expenses for interest shall not be treated as expenses but instead shall be apportioned among related parties (whether or not such related parties are engaged together in an activity described in this subsection) in a manner that is consistent with the rules for determining the source of such expenses in parts I and II of subchapter N of this chapter and the regulations prescribed thereunder.[53]

(9) Coordination with Treaties. The Secretary shall apply the rules of this subsection in determining, under any income tax treaty to which the United States is a party, whether a related party's income is attributable to a permanent establishment, or whether conditions are made or imposed between two enterprises in their commercial or financial relations that differ from those that would be made between independent enterprises, or in applying any similar standard contained in any such income tax treaty, except that the competent authority may, pursuant to any such treaty, agree to a resolution of a matter that is not consistent with the rules of this subparagraph if the competent authority determines that such resolution is necessary to prevent double taxation and is consistent with sound tax administration.

(10) Treatment of Payments Among Related Parties. Except as provided in regulations, payments made among related parties during a taxable year, other than contributions to capital or distributions

53. Regulations may provide exceptions to the rule of this subparagraph for situations in which interest expense is identified with particular elements of a related party's operations, or in which the amount of interest expense incurred by a related party or group of related parties is sufficiently small that an exception is warranted by considerations of sound tax administration.

with respect to a person's ownership interest in a corporation, partnership or other entity, shall be treated as –

> (A) payments in compensation for services, to the extent of the markup described in subparagraph (b)(1)(A) (or such other markup as may be provided in regulations) on the payee's direct and indirect expenses with respect to the services provided or reasonably apportionable to the payer;
>
> (B) payments for the purchase of tangible property, to the extent consistent with (i) the valuation of any tangible property transferred among such related parties for purposes of compliance with United States customs laws or other United States laws requiring valuation of such property; (ii) if no United States laws require valuation of such property, the valuation determined in good faith for purposes of the customs or other laws of another country; or (iii) if no laws of any country require valuation of such property, the valuation of such property determined in good faith by the taxpayer, with such valuation to be adjusted by the Secretary for purposes of this subparagraph only if unreasonable;
>
> (C) payments for the purchase of stock or securities, other financial instruments, interests in real property, or other identifiable interests in property other than intangible property described in section 936(h)(3)(B), to the extent of the fair market value of such interests in property based on the valuation of such interests determined in good faith by the taxpayer, taking into account reasonably available information such as that provided by public securities exchanges, with such valuation to be adjusted by the Secretary for purposes of this subparagraph only if unreasonable;
>
> (D) payments of interest, to the extent of interest on bona fide indebtedness determined at the applicable federal rate, or at a reasonably corresponding market rate of interest in the case of bona fide indebtedness that is denominated in a foreign currency;
>
> (E) payments for the purchase of intangible property described in section 936(h)(3)(B), provided that the transfer of such property constitutes a purchase rather than a license under this chapter, to the extent of the valuation of such

intangible property determined in good faith by the taxpayer, with such valuation to be adjusted by the Secretary for purposes of this subparagraph only if unreasonable;
and, to the extent not otherwise accounted for under this subparagraph, shall be treated as

(F) royalties for the use of intangible property described in section 936(h)(3))(B).

(11) Definitions – For purposes of this subsection, except as otherwise provided in regulations –

(A) Activity – An "activity" shall mean a group of functions related to the conduct of a particular trade or business (or to a particular purpose described in subsections (1) and (2) of section 212), to which two or more related parties contribute, determined at the largest level of aggregation of functions performed that will permit reliable identification of such related parties' respective contributions to the functions comprising an activity.[54] The Secretary may modify a taxpayer's designation of an activity only if such modification is necessary to correct a significant failure reasonably to reflect related parties' relative contributions to the functions comprising an activity.[55]

(B) Participation in an Activity – A related party shall be treated as participating in an activity if such related party performs services, engages in manufacturing, or otherwise engages in economic activity in support of the activity, except that such related party shall not be treated as participating in such activity if such related party's contribution to the activity is of an insubstantial and incidental nature. The Secretary shall prescribe regulations

54. Regulations should specify that the boundaries of an "activity" can be determined in part by the geographic scope of the activity, in keeping with operational divisions maintained in the taxpayer's business.

55. In general, a failure reasonably to reflect related parties' relative contributions to the functions comprising an activity should be considered significant only if the taxpayer has not exercised due diligence and reasonable care in determining such relative contributions, or if the correction of the taxpayer's determination will increase or decrease a party's income subject to taxation by at least the greater of 1% of such income or $300,000.

specifying circumstances under which contributions will be treated as being of an insubstantial and incidental nature.[56]

(C) Expenses – For purposes of this subsection, except as otherwise provided in regulations or in the second sentence of this subparagraph, expenses shall include (i) costs of a kind for which a deduction is allowed under section 162[57] and (ii) allowances of depreciation and amortization. Except as otherwise provided in regulations, amounts that are incurred in connection with the manufacture of property or the purchase of property for resale, which do not constitute either (i) the cost of tangible property purchased for resale, (ii) tangible property that is incorporated in or consumed in the process of manufacturing, or (iii) costs of property for which an allowance of depreciation or amortization is permitted, and that would be described in the preceding sentence except that they are capitalized in the cost of inventory, also shall be treated as expenses for purposes of this subsection.[58]

(D) Party and Related Party – A "party" shall mean any organization, trade, or business as those terms are used in subsection (a), and a "related party" shall mean any of two or more such parties (whether or not incorporated, whether or not organized in the United States, and whether or not affiliated) owned or controlled directly or indirectly by the same interests.

(E) Resident for Income Tax Purposes – Except as otherwise provided in regulations,. a person is resident for income tax

56. It is suggested that such regulations specify that a related party's contribution to a particular activity will be treated as insubstantial and incidental if the expenses associated with the contribution do not exceed 2% of the related party's total expenses.

57. Thus, for example, the purchase price of stock or securities or other financial instruments acquired for any purpose generally will not constitute an "expense."

58. For example, a distributor of washing machines may purchase the machines and also incur such expenses as depreciation on a warehouse in which the machines are stored, and overhead costs associated with the distribution activities, which under § 263A must be capitalized in the distributor's inventory costs. The depreciation and overhead costs, but not the costs of purchasing the washing machines, are treated as "expenses" for purposes of this subsection.

purposes in a country in which its income is subject to taxation, under such country's laws, by reason of such person's residence in such country.[59]

(c) Rules Applicable to Related Parties Resident for Income Tax Purposes in the Same Country. – The Secretary shall provide regulations governing the application of subsection (a) to the activities of related parties that are resident in the same country.[60]

(d) Rulings – The Secretary may, in the Secretary's discretion, issue rulings to particular taxpayers setting forth, by agreement with such taxpayers, the manner in which compliance with the rules of this section shall be determined, including but not limited to how expenses or revenues shall be apportioned among activities, and which operations shall be included in a particular activity. Any such rulings shall extend for specified terms not to exceed five years, although they may in the Secretary's discretion be renewed. Such rulings and background file documents related to such rulings shall be open to public inspection subject to the rules of section 6110(a) and such limitations on public inspection as are provided under this chapter.[61]

(e) Regulations – The Secretary shall prescribe such regulations as may be necessary or appropriate to carry out the purposes of this section, including but not limited to regulations providing for modification of the factor described in subparagraph (b)(1)(A)(i) for use in connection with activities performed in particular industries or in particular geographic locations, to the extent the Secretary believes such modification is necessary to adjust for

59. Regulations should address the application of this subsection to parties that are resident for income tax purposes in more than one country.

60. This provision would be applicable, for example, with respect to the division of income between taxable and tax-exempt affiliates within the United States, and among members of affiliated groups filing consolidated returns (to the extent that their separate incomes may be relevant for federal income tax purposes). It is anticipated that regulations under this provision will, to the extent feasible, rely on principles similar to those prescribed with respect to related parties that are resident for income tax purposes in different countries. In particular, it is anticipated that such regulations will provide for the review of arrangements for the provision of services between related parties based on cost-based pricing methodologies. It also is anticipated that regulations will, to the greatest extent feasible, rely on the apportionments of income and expenses set forth in the taxpayer's accounting records, provided those records follow generally accepted accounting principles and have not been compiled with a principal purpose of tax avoidance.

61. It is suggested that enactment of this language be accompanied by repeal of §§ 6103(b)(2) and 6110(b)(1)(B) (exempting advance pricing agreements from public inspection).

substantially differing expected returns on cost from business activities conducted in such industries or locations.

Examples:

Example 1 – Parentco engages with subsidiaries in different countries in the manufacture and distribution of cars, light trucks, and heavy trucks, as well as parts for those vehicles. Parentco and the subsidiaries all participate in research and development, manufacturing and distribution associated with the cars, light trucks, and heavy trucks. In general, the companies trade among themselves in intermediate goods and finished products relating to cars, light trucks, and heavy trucks, and make available to one another without charge the results of all research and development that they perform.

Parentco and its subsidiaries organize their books and records, establish research and development and marketing budgets, and organize reporting lines for their personnel by reference to two divisions, (i) cars and light trucks, and (ii) heavy trucks. In general, research and development activities performed by personnel assigned to the cars and light trucks division is expected to benefit the manufacture of both cars and light trucks but to provide only minor and incidental benefits with respect to the production of heavy trucks; and research and development performed by personnel assigned to the heavy trucks division is expected to provide only insubstantial and incidental benefits with respect to the production of cars and light trucks.

The Parentco group has been manufacturing and distributing cars and light trucks for many years, and sales in those product lines have been highly profitable. The group only recently, however, has begun the manufacture and distribution of heavy trucks and to date has incurred operating margins from the sales of heavy trucks significantly lower than the margins achieved from sales of cars and light trucks. In addition, the percentage of revenues derived from heavy trucks varies substantially from country to country.

The management of the Parentco group reasonably believes that accounting for the manufacture and distribution of cars and light trucks will permit will permit reliable identification of each group member's respective contributions to the derivation of profits from those vehicles, whereas accounting on an aggregate basis for the manufacture and distribution of cars, light trucks and heavy trucks will overstate the apparent contributions of those entities that contribute disproportionately to the manufacture and sale of heavy trucks.

The manufacture and sale of cars and light trucks and related parts, and the manufacture and sale of heavy trucks and related parts, will each be treated as separate "activities" for purposes of paragraph (b).

Example 2 – The facts are the same as in Example 1 except that in addition Parentco organizes its distribution activities geographically and maintains separate distribution organizations, in both its car and light truck and heavy truck divisions, that are responsible for sales of each category of vehicle and related parts in three regions: (i) the Americas, (ii) Europe/Middle East/Africa, and (iii) Rest of World. Although a number of entities in Parentco's global group participate in the design, manufacture and sale of vehicles in two or all regions, some of such entities are engaged in operations relating only to particular regions. In general, Parentco maintains accounting records for both its car and light truck and heavy truck divisions by geographic region. The manufacture and sale of (i) cars and light trucks, and (ii) heavy trucks, and of parts in each category, each will be treated as consisting of three different activities corresponding to the three regions according to which Parentco organizes its operations.

Example 3 – Techco engages with its subsidiaries in different countries in the manufacture and distribution of human pharmaceuticals, animal medications, and toiletries. Techco and the subsidiaries all participate in research and development, manufacturing and distribution related to human pharmaceuticals and animal medications, and exchange technical results among themselves on a regular basis. No member of the group, however, engages in research and development relating to toiletries. Members of the group do not trade with one another in tangible property. (That is, each group member arranges for the manufacture or purchase of all product that it sells.)

Techco and its subsidiaries organize their books and records, establish research and development and marketing budgets, and organize reporting lines for their personnel by reference to three divisions: (i) human pharmaceuticals, (ii) animal medications, and (iii) toiletries. Separate research departments engage in research relating to human pharmaceuticals and animal medications. Although on occasion a product developed for use in humans has proven useful with respect to animals, and vice versa, the research operations of the human pharmaceutical and animal medication divisions provide only insubstantial and incidental benefits to each other. Profit margins on the three different categories of products manufactured by members of the Techco group vary significantly, both among themselves and among countries; relative sales volumes of the different categories of products also vary significantly among countries.

The management of the Techco group reasonably believes that accounting for the manufacture and distribution of human pharmaceuticals, animal medications, and toiletries separately will permit reliable identification of each group member's respective contributions to the derivation of profits from those product lines. The management of the

Techco group considered whether different categories of human pharmaceuticals should be considered as separate activities for purposes of section 482(b), but reasonably determined that the pharmaceutical industry as a whole depends on the funding of a wide variety of research and development products, only a few of which are likely to be successful. The management of the Techco group therefore reasonably concluded that measuring the profitability of a human pharmaceutical business generally requires reference to its success with respect to multiple categories of products, and that treating the manufacture and distribution of different categories of human pharmaceuticals as separate activities, for purposes of section 482(b), was likely to distort measurement of the contributions made by the different related parties to the success of the business. The manufacture and distribution of human pharmaceuticals, animal medications, and toiletries will be treated as separate activities (or separate groups of activities, if further geographic breakdown is appropriate) for purposes of section 482(b).

Example 4 – The Investco group provides financial planning services to individuals, and also conducts brokerage operations, through a network of subsidiaries resident around the world. Several of the subsidiaries conduct research operations. These include efforts by personnel to develop computer-based tools for predicting clients' financial needs and developing financial plans for their use. Although applicable laws governing, for example, retirement planning differ from country to country, and some development efforts are useful only in particular countries, the financial planning staffs located in different countries engage in significant exchanges of planning techniques. Research operations also seek to identify improved techniques for computer-based trading of securities, and these operations benefit brokerage activities around the world. The relative revenues derived from brokerage activities and from financial planning services vary significantly from country to country. Management of the Investco group reasonably believes that accounting separately for brokerage and financial planning operations is necessary to permit reliable identification of each group member's respective contributions to the derivation of profits from those two components of the group's business. The brokerage and the financial planning operations will both be treated as "activities" for purposes of section 482(b) (or as separate groups of activities that are subdivided into activities along geographic lines).